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THE IMPACT ON SMALL BUSINESS OF LEGISLATION REQUIRING NOTIFICATION TO WORKERS WHO ARE AT RISK OF OCCUPATIONAL DISEASE

HEARING

BEFORE THE

COMMITTEE ON SMALL BUSINESS
UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

THE IMPACT ON SMALL BUSINESS OF LEGISLATION REQUIRING NOTIFICATION TO WORKERS WHO ARE AT RISK OF OCCUPATIONAL DISEASE

JUNE 10, 1987

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HEARING DATE

June 10, 1987:

- Morning session 1

THE IMPACT ON SMALL BUSINESS OF LEGISLATION REQUIRING NOTIFICATION TO WORKERS WHO ARE AT RISK OF OCCUPATIONAL DISEASE

WEDNESDAY, JUNE 10, 1987

U.S. SENATE,
COMMITTEE ON SMALL BUSINESS,
Washington, DC.

The Committee met, pursuant to notice, at 10:22 a.m., in room SR-428A, Russell Senate Office Building, Hon. Dale Bumpers (Chairman of the Committee) presiding.

STATEMENT OF HON. DALE BUMPERS, A U.S. SENATOR FROM THE STATE OF ARKANSAS

The CHAIRMAN. The Committee will come to order. First let me apologize to all of you for my lateness. I do not know why Members of the Senate always want more committee assignments. We have more than we can do justice to now.

I am chairman of a subcommittee of the Energy Committee and we were marking up a very important bill. I had to get there and try to get that bill on track before I could come over here. But my sincere apologies to all of you whom I may have inconvenienced, especially Senator Metzenbaum.

I am going to insert my statement in the record and simply say that the purpose of the hearing this morning is to fulfill what I believe is an essential purpose of the Small Business Committee.

We do not have legislative jurisdiction here. We simply have an obligation to the small business community of the Country and to Congress to be on the lookout for all legislation that affects small business for good or for bad.

And we will hold a number of hearings this year on issues that may impact small business. As you all know, small business creates about 80 percent of the jobs in this Country.

Venture capital is still a problem for them. The cost of regulation continues to be a problem for them. So we have to balance, in cases such as what we are talking about this morning, our desire to see small business grow and prosper, and to see entrepreneurs unafraid to get into new businesses and capitalists unafraid to put venture capital into them.

We have to balance that against all the other things that we as a decent, just society are concerned about. Mainly, the health of the workers. Those things are extremely important to us, and certainly

I do not believe anybody could quarrel with the thrust of notification of workers as to whether or not they are at risk.

What we want to do is to find out what, if any, impact this would have on small business and their ability to meet the requirements of certain legislation that may be coming through Congress.

[The prepared statement of Senator Bumpers follows:]

STATEMENT OF SENATOR DALE BUMPERS
CHAIRMAN, SENATE COMMITTEE ON SMALL BUSINESS
JUNE 10, 1987

THE PURPOSE OF TODAY'S HEARING IS TO EXAMINE NOT THE NEED FOR IMPROVING THE HEALTH AND SAFETY OF AMERICAN WORKERS, BUT THE MEANS OF DOING SO, AND, MORE IMPORTANTLY, HOW CERTAIN PENDING LEGISLATION WOULD AFFECT SMALLER FIRMS AND THEIR ABILITY TO COMPETE BOTH AT HOME AND ABROAD. ALTHOUGH THE SMALL BUSINESS COMMITTEE HAS NO JURISDICTION OVER MEASURES INTRODUCED IN CONGRESS TO REQUIRE NOTIFICATION OF WORKERS OF THEIR EXPOSURE TO HAZARDS IN THE WORKPLACE AND THE POSSIBLE CONSEQUENCE, WE DO HAVE THE RESPONSIBILITY FOR ENSURING THE ECONOMIC AND COMPETITIVE VIABILITY OF SMALL BUSINESSES, WHICH IN RECENT YEARS HAVE CREATED THE LION'S SHARE OF NEW JOBS IN OUR ECONOMY.

THERE HAVE BEEN FEW TIMES IN OUR HISTORY THAT THE SMALL EMPLOYER HAS FACED SO MANY OBSTACLES TO ECONOMIC SUCCESS. STUDIES SHOW THAT THEY ARE CLOSING THEIR DOORS AT A RECORD RATE, AND SINCE THEY ARE RESPONSIBLE FOR MOST OF THE JOBS IN THE U.S. AND FOR THE VAST MAJORITY OF NEW JOBS, IT IS IN THE INTEREST OF THIS NATION THAT THEY REMAIN HEALTHY. CHEAP FOREIGN LABOR AND PRODUCTS, THE ENORMOUS FINANCIAL BURDENS OF TAXATION AND GOVERNMENT PAPERWORK ALL WEIGH MORE HEAVILY ON THE SMALL FIRM AND THE ENTREPREUNER, WHO GENERALLY DON'T HAVE IN-HOUSE TEAMS OF LAWYERS, ACCOUNTANTS AND SECRETARIES WHICH LARGER FIRMS ENJOY.

IF WE BANKRUPT SMALL BUSINESS, WE WILL HAVE DEALT WORKERS WHO MAY BE AT RISK OF DEVELOPING OCCUPATIONALLY-RELATED DISEASES

A DOUBLE BLOW. NOT ONLY MIGHT THEIR RISKS GO UNDETECTED, THEY MIGHT ALSO BE WITHOUT JOBS.

THE SMALL BUSINESS COMMUNITY IS DEEPLY WORRIED BY LEGISLATION PENDING IN THE 100TH CONGRESS AND HAS CONTACTED ME TO EXPRESS ITS FEAR OF THE COSTS AND THE POSSIBILITY OF LITIGATION WHICH COULD PUT THEM OUT OF BUSINESS. THESE SMALL COMPANIES, WHICH OPERATE WITHOUT THE LUXURY OF IN-HOUSE LEGAL AND MEDICAL STAFFS OFTEN CANNOT AFFORD TO OFFER EMPLOYEE HEALTH BENEFITS, NOT OUT OF GREED BUT BECAUSE THE PROFIT MARGIN IS TOO THIN TO PERMIT IT FOR EITHER THE OWNER OR THE EMPLOYEES. WE ARE ALL AWARE THAT THE COST OF PRODUCT LIABILITY AND WORKERS' COMPENSATION ARE CONTINUING TO RISE, AND STATISTICS REVEAL THAT THE COST OF HEALTH CARE AS A COST COMPONENT OF THE CONSUMER PRICE INDEX RAN AT 700% OF THE INFLATION FACTOR FOR ALL OTHER ITEMS IN THE INDEX THROUGH 1986.

WITNESSES WILL COMMENT ON CURRENT LAWS AND REGULATIONS PROMULGATED TO ENHANCE WORKER AWARENESS OF OCCUPATIONAL HAZARDS AS WELL AS THE COST TO SMALL BUSINESS OF EMPLOYEE HEALTH MONITORING, LIABILITY INSURANCE, MEDICAL REMOVAL AND LITIGATION WHICH MIGHT BE INSPIRED BY NEW LEGISLATION. I HOPE THAT EVERY MEMBER OF CONGRESS WILL STUDY CLOSELY THIS LEGISLATION AND ALL OTHER PROPOSALS TO PLACE NEW BURDENS ON SMALL BUSINESS.

UNDER SENATE RULE 25, COMMITTEES ARE REQUIRED TO REVEAL THE COST TO THE FEDERAL GOVERNMENT OF THE MEASURES THEY REPORT, AND I BELIEVE THEY SHOULD ALSO CONSIDER CAREFULLY THE COST TO THE

SMALL ENTITIES IN THE PRIVATE SECTOR WHOSE BUDGETS ARE OFTEN AS STRAINED AS THAT OF THE FEDERAL GOVERNMENT.

I WOULD WELCOME ANY SUGGESTIONS DURING THE COURSE OF THIS HEARING ON METHODS OF ACHIEVING THE GOALS OF LEGISLATIVE PROPOSALS SUCH AS S. 79 AND H.R. 162 THAT CAN BE ACCOMPLISHED WITHOUT DAMAGING THE ABILITY OF THE FREE ENTERPRISE SYSTEM TO MAINTAIN OUR ECONOMIC VIABILITY. THE TASK IS OBVIOUSLY NOT AN EASY ONE, BUT A SOLUTION IS VITAL.

The **Chairman**. Having said that, I will now defer to my distinguished colleague from Missouri, Senator Bond, for an opening statement.

STATEMENT OF HON. CHRISTOPHER BOND, A U.S. SENATOR FROM THE STATE OF MISSOURI

Senator **Bond**. Thank you very much, Mr. Chairman. I will be brief because we have the distinguished Senator from Ohio to hear from.

But I would certainly echo your sentiments. There is no higher responsibility that Government has than to assure the safety and health of the people, especially the people who work in businesses who make the dynamic engine of our American economy work.

We have to take advantage of the developing scientific information. As we learn more about health risks, we need to be at the leading edge of assuring safety to the best of our knowledge, to the best of the scientific evidence that is before us.

At the same time you are quite right in saying that as we do so, we have to be particularly careful that we do not burden the dynamism of small business by putting risks which are greater, burdens that are greater than necessary to satisfy the need to protect the health and safety of the workers.

This is a very difficult balancing act. We have to put the first priority on ensuring healthy workplaces and safety for our workers, and to do so in a way which imposes the least burden on small business.

I look forward to hearing the testimony and seeing the comments of the witnesses who will appear before us today. I commend you, Mr. Chairman, for having this very important session.

The **Chairman**. Thank you. Senator Dixon.

STATEMENT OF HON. ALAN J. DIXON, A U.S. SENATOR FROM THE STATE OF ILLINOIS

Senator **Dixon**. Mr. Chairman, in the interest of time, I will put my statement in the record.

The **Chairman**. Without objection, so ordered.

[The prepared statements of Senators Dixon and D'Amato follow:]

JUNE 10, 1987
STATEMENT BY SENATOR ALAN J. DIXON
COMMITTEE ON SMALL BUSINESS
IMPACT ON SMALL BUSINESS OF S. 79
NOTIFICATION TO WORKERS AT RISK OF
OCCUPATIONAL DISEASE

THANK YOU, MR. CHAIRMAN.

THE LEGISLATION THAT WE ARE HERE TO DISCUSS THIS MORNING HAS A LAUDABLE OBJECTIVE-TO PROVIDE WORKERS WITH VITAL INFORMATION ABOUT THEIR HEALTH STATUS. IT IS DESIGNED TO BE A SELF DEFENSE MECHANISM PROVIDING WORKERS WITH THE ESSENTIAL INFORMATION TO PERMIT THEM TO TAKE THE NECESSARY ACTION TO PREVENT DISEASE, TO DETECT DISEASE AT ITS EARLY STAGES AND TO AMELIORATE THE CONSEQUENCES OF EXISTING DISEASE.

IN 1980, THE DEPARTMENT OF LABOR ESTIMATED THAT JOB RELATED RESPIRATORY DISEASES, ALONE, ACCOUNT FOR AT LEAST 65,000 ACUTE AND CHRONIC DISABILITIES AND 25,000 DEATHS EACH YEAR. WE CAN ONLY SURMISE THE MAGNITUDE OF THIS PROBLEM.

AS WE ALL KNOW, THIS BILL, S.79, CREATES A RISK ASSESSMENT BOARD AT THE DEPARTMENT OF HEALTH AND HUMAN SERVICES TO IDENTIFY STATISTICALLY SIGNIFICANT POPULATIONS THAT ARE AT RISK; AND REQUIRES THE IDENTIFICATION, NOTIFICATION AND COUNSELING OF WORKERS AT HIGH RISK FOR OCCUPATIONAL DISEASE.

SOME CONCEPTUAL QUESTIONS HAVE BEEN RAISED ABOUT THIS LEGISLATION. FOR EXAMPLE, SOME OCCUPATIONAL DISEASES ARE NOT DISTINGUISHABLE FROM NON-OCCUPATIONAL DISEASES AND OFTEN, AN ILLNESS DOES NOT MANIFEST ITSELF IMMEDIATELY AFTER THE EXPOSURE, RATHER A LONG PERIOD OF TIME MAY PASS. HOW WOULD THIS BILL HANDLE THAT SITUATION?

OTHER CONCERNS SPEAK DIRECTLY TO THE LEGISLATION: NOTIFICATION "AS PRACTICABLE WITHIN THE BUDGET RESTRICTIONS" SEEMS VAGUE AND NOT RELATED TO NEED; THERE IS FEAR OF AN INCREASE IN LITIGATION (WITH AND WITHOUT MERIT) BASED ON THE ASSUMPTION THAT NOTIFICATION OF "AT RISK" IS GROUNDS FOR A LAWSUIT; AND THE COST OF THE PROGRAM FOR THE GOVERNMENT AND THE EMPLOYERS -- SETTING UP A DATA BASE, NOTIFICATION OF EMPLOYEES AND MEDICAL EVALUATIONS. IN THE NOTIFICATION PROCESS, CARE MUST BE TAKEN TO AVOID FALSE NOTIFICATION, ASSURE THAT INFORMATION IS ACCURATE AND THAT THE COMMUNITIES, STATE AND LOCAL AGENCIES ARE PREPARED TO RESPOND.

ADDING TO MY CONCERN IS MY UNDERSTANDING THAT THIS BILL IS OPPOSED BY THE DEPARTMENT OF HEALTH AND HUMAN SERVICES. THEY DO NOT BELIEVE THAT ADDITIONAL LEGISLATION IS NECESSARY. THE NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

CURRENTLY PERFORMS STUDIES THROUGH THE HEALTH HAZARD EVALUATION PROGRAM AND NOTIFIES THE EMPLOYEES, UNIONS AND OTHER PARTIES INVOLVED. DURING HEARINGS BEFORE THE SUBCOMMITTEE ON LABOR, ASSISTANT SECRETARY OF THE DEPARTMENT OF HEALTH AND HUMAN SERVICES, DR. ROBERT WINDOM, SUGGESTED THE CURRENT PROGRAMS BE EXPANDED RATHER THAN NEW PROGRAMS DEVELOPED.

GIVEN THE WIDE DISPARITY IN SUPPORT FOR, AND OPPOSITION TO THIS LEGISLATION , I LOOK FORWARD TO THE TESTIMONY THAT WILL BE GIVEN THIS MORNING ON THE IMPACT THAT THIS LEGISLATION WILL HAVE ON SMALL BUSINESS. THE COSTS MUST BE WEIGHED. THE GOVERNMENT AND THE EMPLOYERS BEAR THE BURDEN OF THE COSTS OF IMPLEMENTING THIS LEGISLATION BUT THEY ALSO BEAR THE EXPENSE BURDEN IN TERMS OF EMPLOYEE DISABILITY AND DEATH DUE TO OCCUPATIONAL DISEASE.

I THANK THE CHAIRMAN FOR HOLDING THESE HEARINGS AND AM PLEASED TO HAVE THIS MATTER REVIEWED FROM A SMALL BUSINESS PERSPECTIVE.

STATEMENT BY SENATOR ALFONSE M. D'AMATO
BEFORE THE SMALL BUSINESS COMMITTEE
JUNE 10, 1987

MR. CHAIRMAN, I WOULD LIKE TO WELCOME TO THE SMALL BUSINESS COMMITTEE THIS MORNING OUR DISTINGUISHED PANEL OF WITNESSES WHO WILL DISCUSS THE POSSIBLE CONSEQUENCES OF LEGISLATION WHICH WOULD REQUIRE THE GOVERNMENT TO NOTIFY WORKERS DETERMINED TO BE AT RISK OF OCCUPATIONALLY-RELATED DISEASE.

THE STATISTICS ASSOCIATED WITH OCCUPATIONAL DISEASE ARE OVERWHELMING. EACH YEAR, 100,000 WORKERS DIE AND 390,000 MORE ARE DISABLED FROM OCCUPATIONAL DISEASE. THE FEDERAL GOVERNMENT ESTIMATES THAT 880,000 WORKERS FACE FULL- OR PART-TIME EXPOSURE TO CANCER-CAUSING SUBSTANCES, AND 40 MILLION TO 50 MILLION AMERICAN WORKERS HAVE BEEN EXPOSED TO ONE OR MORE OF THESE HAZZARDS. IN EFFECT, MILLIONS OF AMERICANS ARE TAKING HEALTH RELATED RISKS EVERY DAY THEY ARE ON THE JOB.

STUDIES DONE IN ORDER TO ASSESS THE HEALTH RISKS INVOLVED IN THE WORKPLACE COST MONEY. THE COST OF SUCH A STUDY, WHILE A SMALL BURDEN ON BIG BUSINESSES, BECOMES EXTREMELY ONEROUS TO SMALL BUSINESS OWNERS. COSTS SUCH AS EMPLOYEE MONITORING, LIABILITY INSURANCE, MEDICAL REMOVAL, AND LITIGATION AMOUNT TO A

SUBSTANTIAL INVESTMENT WHICH SMALL BUSINESSES PROBABLY COULD NOT MEET.

THE CONCEPT BEHIND OCCUPATIONAL DISEASE NOTIFICATION IS A WORTHY ONE. NOTIFICATION OF WORKERS EXPOSED TO SUCH RISKS WOULD ALLOW THEM TO TAKE THE NECESSARY PRECAUTIONS TO PROTECT THEMSELVES. THE PURPOSE OF THESE HEARINGS IS TO ASSESS THE IMPACT THAT OCCUPATIONAL DISEASE NOTIFICATION WILL HAVE UPON THE NATION'S SMALL BUSINESS OWNERS. I AM HOPEFUL THAT A WORKABLE SOLUTION COULD BE REACHED THAT AFFORDS WORKERS WITH THEIR RIGHT TO KNOW BUT DOES NOT BECOME A BURDEN UPON SMALL BUSINESS OWNERS.

I LOOK FORWARD TO THE TESTIMONY OF OUR PANEL OF WITNESSES THIS MORNING. I HOPE THAT THEY WILL PROVIDE THE INSIGHT NEEDED IN ORDER FOR THIS COMMITTEE TO ASSESS ADEQUATELY THE IMPACTS OF WORKER NOTIFICATION OF OCCUPATIONAL HAZZARDS UPON SMALL BUSINESS.

THANK YOU, MR. CHAIRMAN.

The **Chairman**. Senator Metzenbaum, we are anxious to hear your statement.

STATEMENT OF HON. HOWARD M. METZENBAUM, A U.S. SENATOR FROM THE STATE OF OHIO

Senator **Metzenbaum**. Thank you very much, Mr. Chairman. I am very happy to have the privilege to be here this morning before the Committee on Small Business, and to talk with you this morning about the impact on small business of S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987.

I do not think I have to tell the Members of this Committee that occupational disease is one of our Nation's major health problems. Each year between 50,000 and 100,000 Americans die from diseases caused by on-the-job exposure to toxic chemicals, wastes, fumes, dusts or industrial processes.

That is more American lives lost each year than were lost in either the Vietnam or Korean Wars. Each year we lose more lives than the total lost in Vietnam or Korea due to occupational exposure to toxic chemicals, wastes, fumes, dusts or industrial processes. I am not talking about on-the-job accidents.

As a matter of fact more Americans have died from occupational disease in this Country in the past 40 years than in all of our wars going back to 1776. When you add in the hundreds of thousands, if not millions, of workers who are disabled from occupational disease, it is clear that we are failing in the battle to preserve occupational health.

The consequences of this failure are enormous. The resultant health care costs to families, to Government, run into the hundreds of millions of dollars. The costs in terms of human misery cannot be counted.

The fact is, it does not have to happen. Occupational diseases are very often preventable. The worker populations involved can be identified in relatively precise terms. The hazards to which they are exposed can be enumerated and measured.

And the occurrence of disease can be minimized through early medical screening and health counseling. After 6 years of Federal neglect, this Nation needs an occupational health defense initiative.

S. 79, which Senator Stafford and I introduced, which I am proud to say now has 34 co-sponsors, four of whom are Members of this Committee, is a first step in that direction.

The working men and women of this Country have a right to know if their jobs create a high risk that they will contract a life-threatening disease. And those who are at risk should have a right to advice on how to obtain appropriate medical monitoring.

S. 79 endows workers with these simple yet life-saving rights. In the 5 months since Senator Stafford and I introduced S. 79, our staffs have met extensively, for long hours, with representatives of the business community, both individual companies, and trade associations.

We received substantial input from small business, including the National Tool and Machine Association and other associations representing small business interests. We have reviewed their constructive suggestions and have worked closely with them on improvements in the bill.

The result is a set of revisions, many revisions, that go a long way toward accommodating the concerns of the business community, including particularly the small business community.

First, we have tightened up the science portions of the bill. Second, we have strengthened the bill's procedural provisions. And finally, we have added provisions minimizing any exposures to liability arising out of the notification process.

In other words, there was a concern that this bill would provide a basis on which to predicate, or to create a foundation for litigation, court action. Our goal is to make the bill liability neutral, with respect to tort and workers compensation cases.

These changes have improved the bill. They also have broadened significantly our base of support. Negotiations at times have been difficult. Very difficult. We have had to ask supporters from organized labor and the public health community to accept revisions about which they were cautious, yes, and even skeptical.

But the result has been worthwhile. As we prepare for full Committee markup next week, I am particularly proud of the support we have received from the business community.

S. 79 has been endorsed by the American Electronics Association, which includes over 3,000 member companies. These include the giants in the field, such as General Electric, IBM, and Digital Electronics Corporation.

But the American Electronics Association also has hundreds, hundreds of smaller companies, including over 1,000 companies with 50 or fewer U.S. employees.

S. 79 also has the support of the Chemical Manufacturers' Association, in addition to the American Electronics Association. The Chemical Manufacturers' Association represents 90 percent of the tonnage of chemicals produced in the United States.

We have received individual letters of support from nearly 20 different chemical companies, including many small businesses as well as large companies such as Union Carbide and W.R. Grace.

Other companies that have endorsed S. 79 include the Atlantic Richfield Co., the Occidental Petroleum Co., and the Crum & Forster Insurance Co.

And I think it is particularly significant that a company as large as Crum & Forster, the second largest underwriter of insurance in this Country, has worked very closely with us and is a strong supporter of our legislation.

With your permission, Mr. Chairman, I would like to introduce these letters of support into the hearing record.

The CHAIRMAN. Without objection.

Senator METZENBAUM. I would also like to quote briefly from one letter submitted from Crum & Forster, the Nation's second ranked writers of general liability insurance and among its largest workers compensation carriers.

> Although some minor refinements remain to be incorporated, we are satisfied with the overall manner in which S. 79 assures that notification will be based only on the best medical and scientific data, meets the needs for procedural protections in the notification process, and minimizes the impact of notification on the adjudication of tort and workers compensation claims.

We look forward to working with you toward the enactment of a measure that we believe will help reduce both the incidence and severity of occupational disease.

We have come a long way. But we are prepared to go further. We recognize that some in the business community still have concerns about certain practical aspects of S. 79, and we will look closely at their concerns.

From the outset, I have stated my sympathy for the interests of small business. I want to pass this bill and I want to pass it in a form that does not place undue burdens on the small business community.

One issue of special interest to small business is the application of the bill's medical transfer provisions when other jobs are not available.

As you know, Mr. Chairman, our staffs are exploring ways in which small business may be exempted from these provisions consistent with the need to protect employees against discrimination, and with exemptions afforded under other occupational health legislation.

I believe we have a mutual commitment to resolve this particular issue and I will work with you and your staff toward that end.

My record in accommodating legitimate business concerns is clear. But accommodation involved a willingness to compromise on both sides. It means some give and take. There comes a point at which business representatives must recognize that many, if not most, of their significant issues have been addressed.

Mr. Chairman, I want to underscore that it is too late in the day to deny the need for this law. We will continue to work with business representatives who have legitimate concerns and who have something constructive to offer.

As I testify today, there are 34 co-sponsors in the Senate—we still have room for additional ones—including a number of Members who are on this Committee.

I look forward to working with the Chairman and other interested Members as we continue our effort to fashion a fair, workable piece of legislation to address one of our Nation's most pressing health problems.

I thank you, Mr. Chairman, and Members of the Committee.

[The prepared statement of Senator Metzenbaum follows:]

U.S. Senator Howard M.
METZENBAUM
of Ohio

Committees:
Judiciary
Labor and Human Resources
Energy and Natural Resources
Select Committee on Intelligence

Chairmanships:
Subcommittee on Antitrust
Subcommittee on Labor
Subcommittee on Energy Regulation and Conservation

WRITTEN TESTIMONY OF SENATOR HOWARD M. METZENBAUM at the June 10, 1987 Hearing on S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987 before the Senate Committee on Small Business

I am pleased to be here today to testify at the Committee's hearing addressing the impact on small business of S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987.

Occupational disease is one of our nation's major health problems. Each year, between 50,000 and 100,000 Americans die from diseases caused by on-the-job exposure to toxic chemicals, wastes, fumes, dusts or industrial processes. That is more American lives lost each year than were lost either in Vietnam or in Korea.

In fact, more Americans have died from occupational disease in this country in the past 40 years than in all our wars going back to 1776. When you add in the hundreds of thousands -- if not millions -- of workers who are disabled from occupational disease, it is clear that we are failing in the battle to preserve occupational health. The consequences of this failure are enormous. The resultant health care costs -- to families and government -- run into the hundreds of millions of dollars. The cost in terms of human misery cannot be counted.

It doesn't have to happen.

Occupational diseases are very often preventable. The worker populations involved can be identified in relatively precise terms. The hazards to which they are exposed can be enumerated and measured. And the occurrence of disease can be minimized through early medical screening and health counseling.

Sadly, the Reagan Administration has turned its back on the occupational health crisis. NIOSH, the Federal agency responsible for identifying occupational hazards and recommending ways to control them, has had its budget cut 38% in real dollar terms since 1981. OSHA has virtually ceased issuing workplace health regulations.

After six years of Federal neglect, this nation needs an occupational health defense initiative.

S. 79, which Senator Stafford and I introduced, is a first step in that direction. The working men and women of this country have a right to know if their jobs create a high risk that they will contract a life-threatening disease. And those who are at risk should have a right to advice on how to obtain appropriate medical monitoring. S. 79 endows workers with these simple yet life-saving rights.

In the five months since Senator Stafford and I introduced S. 79, our staffs have met extensively with representatives of the business community, both individual companies and trade associations. We received substantial input from small business, including the National Tool and Machine Association and other associations representing small business interests. We have reviewed their constructive suggestions, and have worked closely with them on improvements in the bill. The result is a set of revisions that go a long way toward accommodating the concerns of the business community -- including particularly the small business community.

I would like to highlight some of these revisions.

First, we have tightened up the science portions of the bill. The key definitions of "occupational health hazard" and "population at risk" have been made more precise. The Risk Assessment Board has been expanded to include scientists from outside HHS, and the National Academy of Sciences now plays an important role in the selection process. We have specified that in identifying populations at risk, the Board must consider contributory factors, as well as the health consequences of notifying or failing to notify a particular class of employees. And we have eliminated reference to explicit numerical goals for how many workers the Board should strive to notify each year.

Second, we have strengthened the bill's procedural provisions. NIOSH is now responsible for conducting the actual notification after the Risk Assessment Board determines the class or category of employees to be notified. We have extended the time period for notice and public comment in response to a proposed Board determination. We have clarified the particular aspects of a Board determination that are subject to judicial review. We have provided individual employers with important due process rights by giving them reasonable opportunities to challenge what they regard as incorrect notifications by NIOSH.

Finally, we have added provisions minimizing any exposures to liability arising out of the notification process. Our goal is to make the bill liability-neutral with respect to tort and worker's compensation claims. We make clear that a receipt of notice or a finding or determination by the Board may not serve as the basis of a legal claim or be used as evidence in connection with any claim for compensation or damages under federal or state law. In addition, we have limited the scope of medical monitoring and medical removal protections, thereby limiting the cost to employers from these provisions.

These changes have improved the bill, and also have broadened significantly our base of support. The negotiations at times have been difficult. We have had to ask supporters from organized labor and the public health community to accept revisions about which they were cautious and even skeptical. But the result has been worthwhile. As we prepare for Full Committee markup next week, we have achieved a remarkable base of support for this major piece of worker protection legislation. S. 79 has been endorsed by the AFL-CIO and its Industrial Union Department, as well as by public health and public interest organizations such as the American Cancer Society, the American Lung Association, the American Public Health Association, the Association of University Programs in Occupational Health and Safety, the American Association of Occupational Health Nurses, Public Citizen, and the Sierra Club.

But as pleased as I am with these expressions of support, I am especially proud of the support we have received from the business community. S. 79 has been endorsed by the American Electronics Association, which includes over 3,000 member companies. These include the giants in the field, such as General Electric, IBM, and Digital Electronics Corporation. But AEA also has hundreds of smaller members, including over 1,000 companies with 50 or fewer U.S. employees. S. 79 also has the support of the Chemical Manufacturers Association, which represents 90% of the tonnage of chemicals produced in the United States. We have received individual letters of support form nearly 20 different chemical companies, including many small businesses as well as large companies such as Union Carbide and W.R. Grace. Other companies that have endorsed S. 79 include the Atlantic Richfield Company. the Occidental Petroleum Corporation, and the Crum & Forster Insurance Company.

With your permission, Mr. Chairman, I would like to introduce these letters of support into the hearing record. I also would like to quote briefly from one letter, submitted by

Crum & Forster, the nation's second-ranked writers of general liability insurance and among its largest workers' compensation carriers.

> "Although some minor refinements remain to be incorporated... we are satisfied with the overall manner in which [S. 79] assures that notification will be based only on the best medical and scientific data, meets the need for procedural protections in the notification process, and minimizes the impact of notification on the adjudication of tort and workers' compensation claims... We look forward to working with you toward the enactment of a measure that we believe will help reduce both the incidence and severity of occupational disease."

We have come a long way, but we are prepared to go further. We recognize that some in the business community still have concerns about certain practical aspects of S. 79, and we will look closely at their concerns. From the outset, I have stated my sympathy for the interests of the small businessman. I want to pass this bill, and I want to pass it in a form that does not place undue burdens on the small business community.

One issue of special interest to small business is the application of the bill's medical transfer provisions when other jobs are not available. As you know, Mr. Chairman, our staffs are exploring ways in which small business may be exempted from these provisions consistent with the need to protect employees against discrimination and with exemptions afforded under other occupational health legislation. I believe we have a mutual commitment to resolve this particular issue and I will work with you toward that end.

My record in accommodating legitimate business concerns is clear. But accommodation involves a willingness to compromise on both sides. There comes a point at which business representatives must recognize that many, if not most, of their significant issues have been addressed. Mr. Chairman, I want to underscore that it is too late in the day to deny the need for this law. We will continue to work with business representatives who have legitimate concerns and have something constructive to offer.

As I testify today, S. 79 has 34 co-sponsors in the Senate, including a number who are members of this committee. I look forward to working with the Chairman and other interested members as we continue our effort to fashion a fair and workable piece of legislation to address one of our nation's most pressing health problems.

American Electronics Association AEA

1612 K Street N.W. Suite 1100 Washington D.C. 20006 Telephone (202) 331-8050

March 26, 1987

The Honorable Howard M. Metzenbaum
United States Senate
Washington, D.C. 20510

The Honorable Robert T. Stafford
United States Senate
Washington. D.C. 20510

Dear Senators Metzenbaum and Stafford:

The American Electronics Association has appreciated the opportunity to work with you to revise S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987. AEA believes that the new version of S. 79 represents a much-improved approach to worker notification, and the Association supports the legislation in its revised form. In addition to AEA's support, several of AEA's member companies--specifically IBM, Digital Equipment Corporation, and GE--will soon send individual letters of support for S. 79.

In support of legislative process, we plan to continue reviewing Senator Quayle's proposed "Health Risk Notification Act" and other proposals that will come before the committee.

Once again, thank you for the opportunity to participate in the process of improving S. 79. We look forward to continuing to work with you as the revised bill moves through the legislative process.

Sincerely,

Dick Iverson

J. Richard Iverson,
President

GENERAL ELECTRIC
GENERAL ELECTRIC COMPANY
1331 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, D. C. 20004

MARTIN F. CONNOR
WASHINGTON CORPORATE COUNSEL

(202) 637-4116

March 31, 1987

Hon. Howard Metzenbaum
SR-140 Russell Senate Office Bldg.
Washington, D.C. 20510

Hon. Robert T. Stafford
SH-133 Hart Senate Office Bldg.
Washington, D.C. 20510

RE: S.79, the High Risk Occupational Disease Notification and Prevention Act

Dear Senators Metzenbaum and Stafford:

General Electric, as would any responsible employer, shares your interest in preventing and controlling occupational disease and believes, with you, that a program of notification and early detection would be a constructive step in that direction. For that very reason, we have corporate programs in place which are intended to achieve those objectives.

Some weeks ago we went to James J. Brudney, counsel to the Labor Subcommittee and expressed our many serious concerns with S.79, the High Risk Occupational Disease Notification and Prevention Act. He was most courteous and cooperative as was Michael Francis of Senator Stafford's staff in later discussions. Out of these discussions, and their similar discussions with others, came the March 26, 1987 draft revision of S.79 which responds specifically to each of the concerns we had expressed.

On the understanding, therefore, that it is a compromise intended to accommodate the different points of view of various parties in interest, General Electric is prepared to support and work for enactment of S.79 if the March 26 draft is substituted for the present bill.

We appreciate the opportunity to work with you and your staff on this important issue.

Very truly yours,

Martin F. Connor

Martin F. Connor

MFC/jh
cc: James J. Brudney
    Michael Francis

April 3, 1987

The Honorable Howard W. Metzenbaum
SR-140 Russell Senate Office Building
Washington, D.C. 20510

The Honorable Robert T. Stafford
SH-133 Hart Senate Office Building
Washington, D.C. 20510

Dear Senators Metzenbaum and Stafford:

Thank you for the time you and your staffs made available in considering our proposed enhancements to the high risk notification legislation (S.79).

IBM believes strongly in providing a safe and healthy workplace and that employees should be informed of any condition that might prove contrary to that goal. In fact, this practice has been in effect in IBM for years.

We agree with the basic content of S.79 as revised on March 26. Since we have gone to considerable lengths to protect our employees from hazardous exposures, we do not feel the legislation will provide substantial benefit to them personally. However, since congress feels legislation on this issue is needed, we believe the proposed provisions represent an acceptable compromise.

We look forward to working with you and your staff as this legislation moves toward enactment.

Sincerely,

G. D. Lawrence, Jr.

/mjk

March 31, 1987

The Honorable Howard M. Metzenbaum
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

Digital Equipment Corporation wishes to express its support for the goals of a safe and healthy work environment as envisioned in the redraft of S. 79, the "High Risk Occupational Disease Notification and Prevention Act."

Your work with the business community during the past several weeks has resulted in substantial improvements in the original draft of S. 79. The proposed substitute legislation represents an enhanced approach to the notification of those worker populations truly at risk.

Digital has a long-standing commitment to providing a safe and healthy workplace for all of its employees. We look forward to continuing our work with you as this legislation moves through Congress.

Sincerely,

RBPalme

Robert B. Palmer
Vice President and Group Manager
Semiconductor Operations

RBP:jav

Digital Equipment Corporation
77 Reed Road, Hudson, Massachusetts 01749
617.568.4000

OCCIDENTAL PETROLEUM CORPORATION
10889 WILSHIRE BOULEVARD, SUITE 1500
LOS ANGELES, CALIFORNIA 90024
(213) 208-8800

FRANK B. FRIEDMAN
VICE PRESIDENT
HEALTH, ENVIRONMENT AND SAFETY

April 6, 1987

The Honorable Howard M. Metzenbaum
United States Senate
Washington, D.C. 20510

The Honorable Robert T. Stafford
United States Senate
Washington, D.C. 20510

Dear Senators Metzenbaum and Stafford:

Occidental Petroleum Corporation has initially reviewed the revised S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987. You and your staff are to be commended for your efforts to achieve a compromise that would gain broad-based support. Occidental is pleased to offer its support for the revised, compromise version of S.79.

Occidental places the highest priority on the health and safety of its workers. We look forward to working with you throughout the legislative process to insure that the language of this bill, any amendments thereto, and the legislative history will make a positive contribution to worker protection.

Very truly yours,

Frank B. Friedman

CMA

CHEMICAL MANUFACTURERS ASSOCIATION

ROBERT A. ROLAND
President

April 8, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

The Chemical Manufacturers Association (CMA), a nonprofit organization whose 159 member companies represent over ninety percent of the productive capacity of basic industrial chemicals in the United States, supports the goal of an appropriate, scientifically-based worker notification, risk identification and surveillance program. Your bill, S. 79, currently pending before the Labor Subcommittee, is of major importance to us, especially since many of the concepts contained therein reflect current health and safety practices of companies in our industry.

We are grateful for the opportunity recently provided to meet with your Subcommittee Counsel, and to agree on changes that significantly strengthen and improve the bill. With the adoption of these changes the Chemical Manufacturers Association can support your bill, and we will work toward its enactment.

We look forward to continued cooperative efforts in the months ahead.

Sincerely,

Formerly Manufacturing Chemists Association—Serving the Chemical Industry Since 1872.
2501 M Street, NW • Washington, DC 20037 • Telephone 202/887-1106 • Telex 89617 (CMA WSH)

A XEROX Financial Services Company

Crum & Forster Insurance Companies

1025 Connecticut Avenue, N.W.
Suite 414
Washington, D.C. 20036
(202) 296-5850

Leslie Cheek
Senior Vice President
Federal Affairs

Crum & Forster Corporation

April 8, 1987

The Honorable Howard M. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
606 Hart Senate Office Building
Washington, D. C. 20510

Dear Mr. Chairman:

Re: S. 79, the High-Risk Occupational Disease Notification and Prevention Act of 1987

For the past several weeks, it has been our pleasure and privilege to work with the capable staff of your Subcommittee on Labor to address the concerns we articulated in our February 24 testimony on the captioned legislation.

Although some minor refinements remain to be incorporated in the March 26 redraft of the bill, we are satisfied with the overall manner in which it assures that notification will be based only on the best medical and scientific data, meets the need for procedural protections in the notification process, and minimizes the impact of notification on the adjudication of tort and workers' compensation claims.

Accordingly, and with the understanding that the early proponents of S. 79 are willing to endorse the redraft throughout the legislative process, the Crum & Forster Insurance Companies are pleased to inform you of their support for your legislation. We look forward to working with you toward the enactment of a measure that we believe will help reduce both the incidence and severity of occupational disease.

Sincerely yours,

Les Cheek

Leslie Cheek, III
Senior Vice President-Federal Affairs

LC/kor
cc: The Honorable Robert T. Stafford

Olin
120 LONG RIDGE ROAD, P.O. BOX 1355, STAMFORD, CT 06904-1355

JOHN W. JOHNSTONE
President

1987 APR 22 [illegible] 8:55

April 16, 1987

The Honorable Howard M. Metzenbaum
140 Senate Russell Office Building
United States Senate
Washington, DC 20510

Dear Mr. Chairman:

I serve on the Executive Committee of the Chemical Manufacturers Association (CMA) and am President and Chief Operating Officer of Olin. Our company has a physical presence in Ohio with operations in Berea, Rocky River and Wadsworth.

I am pleased to say both Olin and CMA endorse your revised High-Risk Occupational Disease Notification and Prevention Act.

We at Olin are proud that our top manufacturing priority is employee health and safety. Many of our practices are reflected in your bill.

We appreciate the opportunity our industry had to work with you and your staff on this bill. The discussions have resulted in a bill we can support, and we will work with CMA toward its enactment.

Very truly yours,

John W Johnstone

John W. Johnstone
Chief Operating Officer

JWJ:dsm

OLIN CORPORATION

UNION CARBIDE CORPORATION 39 OLD RIDGEBURY ROAD, DANBURY, CT 06817-0001

ROBERT D. KENNEDY
PRESIDENT AND CHIEF EXECUTIVE OFFICER

April 13, 1987

The Honorable
Howard M. Metzenbaum
Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

The High Risk Occupational Disease Notification bill (S.79) is currently under active consideration by the Subcommittee on Labor. We support the goal of a scientifically-based program for notification of appropriate works and associated programs of risk identification and surveillance. We currently follow a similar practice.

It is my understanding that you will recommend some revisions to the bill that strengthen the scientific basis for notifications and make other changes that significantly improve the bill. With the adoption of these changes, Union Carbide can support the bill and work for its enactment.

Sincerely,

R. D. Kennedy

Rolf Bernegger, Vice President
Safety, Health & Ecology
CIBA-GEIGY Corporation
Ardsley, New York 10502
Telephone 914 478 3131

CIBA–GEIGY

1987 APR 20 AM 8:17

April 16, 1987

The Honorable Howard H. Metzenbaum
United States Senate
Washington, D.C. 20510

Dear Senator Metzenbaum: LaB

CIBA-GEIGY Corporation, a wholly-owned subsidiary of CIBA-GEIGY Limited, Basel, Switzerland, with over 13,000 employees in the United States, commends you and your able staff for the significant improvements to your worker notification bill, S.79. Many of the concepts contained in the bill reflect the current health and safety practices of our company.

We are pleased with your willingness to incorporate into the redraft of S.79 additional changes that will significantly strengthen important scientific principles and procedural and liability safeguards. With the adoption of these changes, CIBA-GEIGY Corporation can support your bill.

We look forward to continued cooperative efforts as we work toward enactment of S.79 as changed.

Sincerely yours,

Rolf Bernegger

RB18:22:es

P.S. Identical letter has been submitted to:
The Honorable Robert T. Stafford
United States Senate
Washington, D.C. 20510

American Cyanamid Company
1575 Eye Street, N.W.
Washington, D.C. 20005
(202) 789-1222

St. Clair J. Tweedie
Director
Government Relations

1987 APR 20 AM 8:53

April 16, 1987

The Honorable Howard M. Metzenbaum
United States Senate
140 Russell Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

We were pleased to note the progress of your subcommittee during last week's markup of S. 79: the Disease Notification bill. The substitute you introduced is significantly improved and comes close to incorporating the principles we advocate.

You mentioned in the subcommittee meeting of April 9 that some additional changes, recommended by the Chemical Manufacturers Association (CMA), would also be made before the full Committee marks up the bill. We think those changes will improve the bill further and believe the support for your legislation will be very broad as a result.

We look forward to supporting your bill and working with you on these issues.

Sincerely,

St. Clair J. Tweedie

St. Clair J. Tweedie

SJT/iel

INDEPENDENCE MALL WEST PHILADELPHIA PA 19105 U.S.A. TELEPHONE (215) 592-3000
CABLE ADDRESS ROHMHAAS TELEX 845 247 TWX 710 670 5335 TELECOPIER (215) 592 3377

ROHM
AND
HAAS
COMPANY

1987 APR 20 AM 10:05

April 10, 1987

The Honorable Howard M. Metzenbaum
U. S. Senate
140 Russell Senate Office Building
Washington, DC 20510

Dear Senator Metzenbaum:

Rohm and Haas Company is joining its trade association, the Chemical Manufacturers Association, ~~in~~ agreeing to certain changes in your worker notification bill. Accordingly, we will work toward enactment of the revised bill.

Sincerely,

Kenneth E. Davis

Kenneth E. Davis
Director of Government Relations

KED/lfw

Kenneth Y. Millian, Vice President &
Director of Government Relations

W. R. Grace & Co.
1511 K Street, N.W.
Washington, D.C. 20005

(202) 628-6424

1987 APR 13 AM 11:56

April 10, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
U.S. Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Re: S. 79 - High Risk Occupational Disease Notification and Prevention Act of 1987

Dear Mr. Chairman:

W. R. Grace & Co., as a member of the Chemical Manufacturers Association, is pleased to have had the opportunity to meet with your Subcommittee Counsel and to agree to changes that strengthen and improve S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987. Your bill, which incorporates many of the concepts reflected in current health and safety practices of our company, is of major importance to us.

With the adoption of these changes, we can support your bill and will work towards its enactment. You and your staff are to be commended for addressing the concerns of individuals who are considered at risk, while incorporating industry's position that notification be based on good science and minimizing the impact of notification on adjudication of tort and workers' compensation claims.

We look forward to working with you in your efforts to address the issue of historic concern to all of us -- that of improving worker health and safety.

Sincerely,

RCO

515 South Flower Street
Los Angeles, California 90071
Telephone 213 486 2533

L. M. Cook
Chairman and
Chief Executive Officer

April 20, 1987

The Honorable Spark M. Matsunaga
United States Senate
Committee on Labor and Human
Resources
Washington, D.C. 20510-6300

Dear Senator Matsunaga:

Thank you for your letter of April 8 regarding S79, the High Risk Occupational Disease Notification and Prevention Act.

We appreciate being able to work with you on specific language related to employee transfer provisions. These changes, and the other modifications negotiated with the Chemical Manufacturers Association and the American Electronics Association, have resulted in a significantly improved bill.

With the adoption of these changes, ARCO can support the modified version of S79.

ARCO will indeed continue its efforts to provide for a safe and healthy workplace for all its employees. We look forward to working with you through the legislative process to ensure that the modified version of S79 emerges as the bill endorsed by both the Senate and the House.

Sincerely,

Lod Cook

L. M. Cook

LMC:bdl

cc: Senator Howard M. Metzenbaum
Senator Dan Quayle

Atlantic Richfield Company

M&T CHEMICALS INC.
ONE WOODBRIDGE CENTER
WOODBRIDGE, NEW JERSEY 07095
(201) 499-2190

MAX S. BASS
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

April 20, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

I am writing to express my support of S.79, as revised, as a consequence of input from the Chemical Manufacturers Association (CMA). With the agreed-to changes I, as the occasion arises, will publicly endorse the bill.

Your insistance on fairness and input from all concerned areas of our society has made the provision of the revised proposal viable as well as meaningful. We appreciate your leadership and statesmanship.

Sincerely,

Max S. Bass
President and
Chief Executive Officer

MSB:ik
cc: Robert A. Roland
President, CMA

HANS C. NOETZLI
President
LONZA INC.

21-00 ROUTE 208
FAIR LAWN, NEW JERSEY 07410
(201) 794-2400

1987 MAY -4 PM 2: 59

April 30, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor & Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D. C. 20510

Dear Senator Metzenbaum:

As an active member of The Chemical Manufacturers Association, Lonza Inc. is familiar with the content of revised bill S.79, The High Risk Occupational Disease Notification and Prevention Act.

This bill, currently pending before your Labor Subcommittee, contains many concepts which reflect the current health and safety practices of Lonza Inc. and other companies in our industry and are of major importance to us. The changes your Subcommittee has made significantly strengthens and improves it.

We endorse the revised version of this bill and support its enactment.

Sincerely yours,

Hans C. Noetzli

HCN/fpb

CHURCH & DWIGHT CO., INC.

469 NORTH HARRISON STREET
PRINCETON NJ 08540
(609) 683 5900

DWIGHT C MINTON
CHAIRMAN
CHIEF EXECUTIVE OFFICER

1987 MAY 11 AM 10: 38

May 5, 1987

Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor & Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D. C. 20510

Dear Mr. Chairman,

We at Church & Dwight have been very interested in the discussions and written information on the High Risk Occupational Disease Notification and Prevention Act, S.79. The objectives of the proposed legislation are valuable and sound.

As I mentioned during my visit with you some time ago, Church & Dwight has a number of plant locations including a major facility in Old Fort, Ohio. This plant, incidentally, is now being expanded to produce a new animal feed product called Megalac. This product is based upon research performed at Ohio State University. The plant will employ additional people from the Old Fort area.

As a manufacturer, we are directly concerned about the health of our employees. There are some features in the original bill which needed refinements and we have been working toward these changes. These involved the qualifications of members on the Risk Assessment board, elimination of the quota for notification and the substantial evidence test as a standard for judicial review, among others.

I now understand, through the Chemical Manufacturer's Association, that these adjustments have been made and this has resulted in a more comprehensive, effective bill.

Church & Dwight can now fully support the proposed legislation and will look forward to its enactment.

Sincerely,

Dwight C. Minton

Dwight C. Minton
Chairman of the Board

DCM/rmm

ARM & HAMMER DIVISION   CHEMICALS DIVISION

General Chemical Corporation

General
Chemical

90 East Halsey Road
P.O. Box 394
Parsippany, New Jersey 07054-0394 (201) 515-0900

'87 MAY -6 AM 9 01

April 30, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

We wish to compliment you and your staff for the recent revisions which were made to 5.79, the High Risk Occupational Disease Notification and Prevention Act of 1987. We believe these constructive changes will help assure this legislation achieves its intended results in a timely and effective manner.

General Chemical Corporation is pleased to join with the Chemical Manufacturers Association and other members of the American business community in expressing our support for 5.79 in its present form.

Sincerely yours,

Richard R. Russell
President

RRR:dw/419

NALCO CHEMICAL COMPANY
ONE NALCO CENTER ▫ NAPERVILLE, ILLINOIS 60566-1024 ▫ AREA 312-961-9500

W. H. CLARK
CHAIRMAN,
PRESIDENT AND
CHIEF EXECUTIVE OFFICER

[illegible] MAY -6 [illegible]

May 1, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, DC 20510

Dear Mr. Chairman:

We at Nalco Chemical Company have just learned of your agreement to a number of important changes to S.79, the High Risk Occupational Disease Notification and Prevention Act. With the adoption of these changes, we will support this bill and work toward its adoption.

We in the chemical industry wholeheartedly support the goal of a sound worker surveillance and notification program. We also appreciate your good efforts and those of your staff to work with the chemical industry and others to develop a bill which is satisfactory to all concerned.

Sincerely,

W H Clark

WHC:eas

1987 MAY -8 AM 11: 02

Mallinckrodt, Inc.

aymond F. Bentele
resident
Chief Executive Officer

675 McDonnell Blvd.
P.O. Box 5840
St. Louis, MO 63134
(314) 895-2115

May 1, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

Your Bill, S.79, as revised, is a scientifically-based worker notification plan that incorporates many of the objectives and practices that companies in the chemical industry have long followed to ensure the health of our employees. We join other members of the Chemical Manufacturers Association in endorsing the Bill.

Our industry appreciates the efforts of you and your staff to ensure that the revised Bill rests on sound scientific principles. We are committed to work for its passage, and we believe that it will win widespread support as the result of your work.

Sincerely,

R F Bentele

RFB:mls

Mallinckrodt, Inc.

Walter W. Thulin
Vice President,
Flavor and Fragrance Group

675 McDonnell Blvd.
P.O. Box 5840
St. Louis, MO 63134
(314) 895-2166

'87 MAY -9 PM 2:50

May 5, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D. C. 29510

Dear Senator Metzenbaum:

Your Bill, S.79, as revised, is a scientifically-based worker notification plan that incorporates many of the objectives and practices that companies in the chemical industry have long followed to ensure the health of our employees. We join other members of the Chemical Manufacturers Association in endorsing the Bill.

Our industry appreciates the efforts of you and your staff to ensure that the revised Bill rests on sound scientific principles. We are committed to work for its passage, and we believe that it will win widespread support as the result of your work.

Sincerely,

CC: Chemical Manufacturers Association
2501 M. Street N. W.
Washington, D. C. 20037

Mallinckrodt, Inc.

DIAGNOSTIC IMAGING SERVICES
9455 MIDWEST AVENUE • GARFIELD HEIGHTS, OHIO 44125 • (216) 663-2525

1987 MAY 11 PM 1:44

May 6, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

Your Bill, S.79, as revised, is a scientifically-based worker notification plan that incorporates many of the objectives and practices that companies in the chemical industry have long followed to ensure the health of our employees. We join other members of the Chemical Manufacturers Association in endorsing the Bill.

Our industry appreciates the efforts of you and your staff to ensure that the revised Bill rests on sound scientific principles. We are committed to work for its passage, and we believe that it will win widespread support as the result of your work.

Sincerely,

Barbara Scavullo
Facility Manager

BS:clm

FRIES & FRIES
The Flavormakers
Division of Mallinckrodt, Inc

1987 MAY 18 AM 9:59

May 6, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

Your Bill, S.79, as revised, is a scientifically-based worker notification plan that incorporates many of the objectives and practices that companies in the chemical industry have long followed to ensure the health of our employees. We join other members of the Chemical Manufacturers Association in endorsing the Bill.

Our industry appreciates the efforts of you and your staff to ensure that the revised Bill rests on sound scientific principles. We are committed to work for its passage, and we believe that it will win widespread support as the result of your work.

Sincerely,

M. E. Davis
Vice President
and General Manager
Fries and Fries

MED:tkc

Corporate Offices | 110 E. 70th Street | Cincinnati, Ohio 45216 | 513/948-8000 | TELEX 21-4348
Regional Offices | Minneapolis, Minnesota | Tarrytown, New York | San Francisco, California | Toronto, Ontario | Montreal, Quebec

Occidental Chemical Corporation

1987 MAY 15 PM 3 20

J. Roger Hirl
President and Chief Operating Officer

May 12 1987

The Honorable Howard H Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, DC 20510

Dear Mr Chairman:

Occidental Chemical Corporation is concerned with your bill, S. 79 currently pending before the Labor Subcommittee. OxyChem, as well as all members of the Chemical Manufacturers Association, will be affected, especially since many of the concepts contained in this bill reflect current practices of our company and many of the others in the industry.

We are aware that representatives of CMA met recently with Subcommittee Counsel to discuss agreement on changes that significantly strengthen and improve the bill. We believe that with these modifications, we can support your bill and will extend efforts toward its enactment.

Occidental is a strong supporter of appropriate legislation impacting workers in our facilities and are supportive of cooperative efforts to assure that workplace safety is assured.

Sincerely,

JRH:dli

OxyChem
Corporate Office
RiverPark
P.O. Box 4020, Darien, Connecticut 06820 203/854-3804

UNIROYAL

UNIROYAL CHEMICAL COMPANY, INC.
World Headquarters
Middlebury, Connecticut 06749

203-573-3270

ERIC JOHNSON
Vice President
Chemical Operations

1987 MAY 18 AM 10 30

April 29, 1987

The Honorable Howard M. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

The revised bill S.79, currently being considered by the Subcommittee on Labor, represents a substantial improvement in the effort to notify workers of potentially hazardous substances in the workplace.

As you know, Uniroyal Chemical has in place a long-standing, comprehensive program that identifies workplace risks and fully counsels workers on them at all of our manufacturing locations, including our plant in Painesville, Ohio. By providing a framework for such programs on a national basis, we believe S.79 will contribute toward further enhancing the health and safety of the American workforce.

Sincerely,

Eric Johnson

Forma Scientific
DIVISION OF MALLINCKRODT, INC.

Norman E. Drissell
Vice President & General Manager

P. O. Box 649
Marietta, OH 45750
(614) 374-1865

[illegible] 10:57

May 6, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D. C. 20510

Dear Senator Metzenbaum:

Your Bill, S.79, as revised, is a scientifically-based worker notification plan that incorporates many of the objectives and practices that companies in the chemical industry have long followed to ensure the health of our employees. We join other members of the Chemical Manufacturers Association in endorsing the Bill.

Our industry appreciates the efforts of you and your staff to ensure that the revised Bill rests on sound scientific principles. We are committed to work for its passage, and we believe that it will win widespread support as the result of your work.

Sincerely,

Norman E. Drissell

Norman E. Drissell
Vice President & General Manager
FORMA SCIENTIFIC

NED:mh

cc: Chemical Manufacturers Association
2501 M Street, NW
Washington, D.C. 20037

NATIONAL STARCH AND CHEMICAL CORPORATION
FINDERNE AVENUE, BRIDGEWATER, NEW JERSEY 08807

1987 MAY 11 AM 11: 05

JOHN B. DOHERTY
VICE PRESIDENT
EXTERNAL AFFAIRS

May 4, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

As a member company of the Chemical Manufacturers Association (CMA), we want you to know that we support your bill, S. 79 as amended, currently pending before the Labor Subcommittee. We share your interests in health and safety practices of companies in our industry and look forward to the enactment of S. 79.

Sincerely,

John B. Doherty

JBD/hn

Kodak

1987 APR 27 AM 9 5

April 21, 1987

The Honorable Howard M. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum,

Eastman Kodak Company is a manufacturer of a variety of products with major manufacturing facilities in nine states and sales and distribution operations in many other states. As a multi-state employer, we share the interest of the public and of Congress in providing a safe and effective work place. This interest became the object of scientific research at Kodak more than fifty years ago, with the establishment of the company's first Laboratory of Industrial Medicine in 1936.

As a member of the Chemical Manufacturers Association (CMA), we support the goal of providing appropriate notification and medical surveillance for properly identified risks. We believe that your bill, S.79, has been significantly improved by the constructive revisions agreed to by you and your staff after discussions with CMA, Senator Quayle and others. The general concepts contained in the amended bill reflect good corporate practice and sound scientific principles.

Yours truly,

Wells Denyes
Manager
Federal Government Relations

WD:mam

cc: Senator Dan Quayle

EASTMAN KODAK COMPANY • EASTMAN CHEMICALS DIVISION
SUITE 705, 1919 PENNSYLVANIA AVENUE, N.W. • WASHINGTON, D. C. 20006 • 703 527-2000

NMA
Medical Physics Services
9700 GARFIELD BLVD.
CLEVELAND, OHIO 44125
(216) 641-5799

1987 MAY 18 AM 10 53

May 8, 1987

The Honorable Howard H. Metzenbaum
Chairman, Subcommittee on Labor
Committee on Labor and Human Resources
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

Your bill, S.79, as revised, is a scientifically-based worker notification plan that incorporates many of the objectives and practices that companies in the chemical industry have long followed to ensure the health of our employees. We join other members of the Chemical Manufacturer's Association in endorsing the Bill.

Our industry appreciates the efforts of you and your staff to ensure that the revised Bill rests on sound scientific principles. We are committed to work for its passage, and we believe that it will win widespread support as the result of your work.

Sincerely,

Paul Early

Paul J. Early
Director, Health Physics Services

PJE/amc

MALLINCKRODT, INC. Mallinckrodt® DIAGNOSTIC PRODUCTS DIVISION

AMERICAN
CANCER
SOCIETY® NATIONAL OFFICE

VIRGIL LOEB, JR., M.D.
President

March 13, 1987

The Honorable Howard Metzenbaum
United States Senate
SR140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

On behalf of the two and one-half million volunteers of the American Cancer Society, I would like to commend you for introducing in the 100th Congress the "High Risk Occupational Disease Notification and Prevention Act of 1987." We believe that you have again presented a realistic and practical bill, which if enacted, would establish a non-threatening system for monitoring workers in business and industrial situations who are, by the very nature of their work, exposed to substances known or suspected of causing cancer.

The American Cancer Society is committed to cancer prevention and believes that S. 79 is a step towards implementation of knowledge gained in the last few years regarding the effects of exposure of workers to hazardous substances in the workplace. Enactment of your legislation would help prevent and modify risks of some occupationally induced cancers. The American Cancer Society supports S. 79 and we will work with you to secure passage of this important health legislation.

Sincerely,

Virgil Loeb

Virgil Loeb, Jr., M.D.

AMERICAN CANCER SOCIETY, INC.
90 PARK AVENUE, NEW YORK, N.Y. 10016 · 212-736-3030

Office of Government Relations
Fran Du Melle, Director
1101 Vermont Avenue N.W. · Suite 402
Washington, D.C. 20005-3521
(202) 289-5057

AMERICAN LUNG ASSOCIATION
The Christmas Seal People ®

January 28, 1987

The Honorable Howard M. Metzenbaum
United States Senate
Washington, DC 20510

Dear Senator Metzenbaum:

The American Lung Association again commends you for the introduction of the "High Risk Occupational Disease Notification and Prevention Act," S. 79. The ALA has long supported the education of workers regarding workplace health hazards and believes notification of workers of identified risks is essential.

Workers in the United States face an ever increasing problem from occupational and environmental exposure to toxic substances. The lung is both a target organ and a portal of entry for toxic substances. The National Institute for Occupational Safety and Health has developed a list of the leading work related diseases and injuries - occupational lung diseases rank number one.

The ALA supports you in your efforts to secure passage of this important occupational health legislation. As you continue to work on this legislation, ALA offers to you its medical and scientific expertise on risk identification and development of data bases to achieve the objectives of this legislation. Please contact Fran Du Melle of our Government Relations staff should you need any assistance or additional information.

Sincerely,

Alfred Munzer

Alfred Munzer, MD
Chairman, ALA/ATS
Government Relations
Committee

AM:tsd

cc: ALA of Ohio

National Headquarters: 1740 Broadway New York, N.Y. 10019-4374 • James A. Swomley, Managing Director

AMERICAN PUBLIC HEALTH ASSOCIATION
1015 Fifteenth Street, N.W., Washington, D.C. 20005 • (202) 789-5600

RUTH ROEMER, J.D., *President*

April 2, 1987

Dear Senator:

The American Public Health Association supports legislation to establish a federal program to identify and notify individual workers at risk of occupationally induced disease, and to counsel them appropriately on medical surveillance procedures. The Association urges quick action on S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987.

In 1985, APHA testified in support of this legislation, and during its recent Annual Meeting, the APHA Governing Council adopted a resolution entitled "Worker Notification of Adverse Health Findings", (attached). Our resolution recognizes the ethical obligation of government agencies to warn workers who are at high risk, and points out that there are sound public health reasons for doing so - early medical intervention, and secondary prevention and treatment.

We urge you to support the High Risk Occupational Disease Notification and Prevention Act of 1987 and look forward to working with you towards its passage.

Very truly yours,

Ruth Roemer

Ruth Roemer, JD
President

Attachment

bcc: Nancy Rogers

American Federation of Labor and Congress of Industrial Organizations

815 Sixteenth Street, N.W.
Washington, D.C. 20006
(202) 637-5000

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March 25, 1987

Honorable Howard M. Metzenbaum
United States Senate
140 Russell Senate Office Building
Washington, D.C. 20510

Dear Senator Metzenbaum:

The AFL-CIO has reviewed the most recent revised draft of S. 79. Based on that review and on the understanding that this draft represents an agreed-upon compromise designed to secure a broad range of support for the bill, this is to advise you that the AFL-CIO is prepared to support, and to work for the enactment of, S. 79 in its revised form.

We are grateful to you and to your staff for your efforts in securing a large measure of agreement on an approach that will serve to facilitate passing this important piece of worker-protection legislation.

Sincerely,

Robert M. McGlotten
Director of Legislation,
AFL-CIO

David Mallino
Director of Legislation
Industrial Union
Department, AFL-CIO

Association of University Programs in Occupational Health & Safety

Marcus M. Key, M.D.
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Raymond R. Suskind, M.D.
Past President, 1981-1982

Don B. Chaffin, Ph.D.
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Jeffrey S. Lee, Ph.D.
Past President, 1985-86

Philip J. Landrigan, M.D., MSc.
President, 1986-

Division of Environmental and
Occupational Medicine
Dept. of Community Medicine
The Mt. Sinai School of Medicine
New York, NY 10029
(212) 650-6173

February 11, 1987

Dear Senator:

The Association of University Programs in Occupational Health and Safety (AUPOHS) strongly supports "The High Risk Occupational Disease Notification and Prevention Act of 1987" (H.R. 162 and S. 79), co-sponsored by Senators Metzenbaum and Stafford, Representative Gaydos, and some one hundred other co-sponsors in the Senate and House of Representatives.

The Association represents the 14 regional Educational Resource Centers that provide graduate training and continuing education in occupational health and safety. They are located at public and private universities in fourteen states, including Alabama, California, Ohio, Massachusetts, Illinois, Maryland, Michigan, Utah, Minnesota, New York, New Jersey, Texas, North Carolina and Washington. These regional ERCs are supported, in part, by training grant funds from the National Institute for Occupational Safety and Health (NIOSH).

We know from first-hand experience the tremendous costs in human and economic terms of work-related injuries, diseases, illnesses, disabilities, and death. Hundreds of thousands of American workers are killed or disabled annually in the workplace, yet there is presently no national program to monitor worker populations who are at high risk.

S. 79/H.R. 162 would establish such a national program that would encourage the early detection, notification, treatment, and aid in the prevention of the most dangerous occupational diseases. It would also help to cut the estimated $2.5 billion in costs of occupational diseases to the Social Security system alone, as well as reduce spiraling health care costs in the private sector.

We believe that this legislation is deserving of your active support in the 100th Congress. If you have not already agreed to co-sponsor "The High Risk Occupational Disease Notification and Prevention Act of 1987", we hope that you will do so and that you will work for its enactment in the coming months.

With every good wish,

Sincerely,

Philip J. Landrigan, M.D., M.Sc.
President

PJL:ss

AAOHN

Elizabeth M. Bodnar, RN
President

Matilda A. Babbitz, RN
Executive Director

February 13, 1987

The Honorable Edward M. Kennedy
U.S. Senate
SR-113 Russell Senate Office Bldg.
Washington, DC 20510

Dear Senator Kennedy:

Millions of American workers are exposed to thousands of toxic substances and physical agents that are in wide industrial and commercial use in the United States.

Currently, no national program for monitoring worker populations at risk of occupational disease has been established.

The Board of Directors of the American Association of Occupational Health Nurses (AAOHN) has voted to support S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987, because of the bill's commitment to health promotion and worker protection.

S. 79, introduced by Sen. Howard M. Metzenbaum of Ohio and Sen. Robert T. Stafford of Vermont, establishes a federal program to identify, notify, counsel and monitor workers at high risk of occupational disease.

In addition, the bill:

- o authorizes and directs the certification of occupational and environmental health centers among existing health-care facilities to provide technical support for ongoing health surveillance of workers at high risk of occupational disease.
- o expands federal research training and education efforts to identify and define worker populations at risk of occupational disease and improve the means of health surveillance.
- o establishes a set of protections for workers against discrimination on the basis of their identification and notification of occupational disease risk.

S. 79 does not duplicate OSHA's Hazard Communication Standard, which is designed to warn workers of the hazards of existing chemicals in the workplace.

Unlike S. 79, the OSHA hazard standard does not seek to isolate those workers at particular high risk because of previous exposures and inform them of the risk.

Moreover, the OSHA hazard standard does not provide for health counseling and monitoring, which is a major component of S. 79.

Further, the OSHA standard does not cover former employees (many of whom are at the highest risk) or major sectors of the current work force such as public employees and those engaged in the transportation industry.

Thus, S. 79 is a critical supplement to the OSHA standard, not a duplication of it.

The American Association of Occupational Health Nurses, therefore, urges you to join Sen. Metzenbaum and Sen. Stafford in cosponsoring S. 79.

To become a cosponsor of the bill or for further information, contact Jim Brudney, Senate Labor Subcommittee counsel, at 4-5546.

Sincerely,

Matilda A. Babbitz

Matilda A. Babbitz
Executive Director

MAB/cs

PUBLIC CITIZEN

Buyers Up ☐ Congress Watch ☐ Critical Mass ☐ Health Research Group ☐ Litigation Group ☐ Tax Group

U.S. Senate
Washington, D.C.

March 11, 1987

Dear Senator:

Public Citizen, a consumer organization representing 50,000 members nationwide, urges you to support and co-sponsor S. 79, the High Risk Occupational Disease Notification and Prevention Act, introduced by Senators Howard Metzenbaum and Robert Stafford. This act would establish a national program for monitoring worker populations found to be at risk for occupational diseases and set up a federal program to identify, notify, counsel, and provide medical follow-up for, these workers.

An estimated 100,000 workers die each year from occupational diseases, and 390,000 more are disabled. Upwards of 11 million Americans are exposed to various carcinogens in the work place at some time. The Occupational Health and Safety Administration (OSHA) has estimated that if occupational exposures account for only 1-5% of all cancers in the United States, the number of cancer deaths from this sphere alone would be between 3,800 and 19,000 annually. However, OSHA believes that as many as 20-40% of U.S. cancers in coming decades may be occupationally related.

In early 1985 Doctor Sidney Wolfe of Public Citizen's Health Research Group (HRG) submitted testimony in connection with a similar High Risk Notification bill introduced in the 99th Congress. In looking at the problems arising from work place hazards, Dr. Wolfe had several concerns:

> -A 1984 report by HRG found that out of 253 worksites studied by the National Institute for Occupational Safety and Health (NIOSH) 200,000 workers were at potentially increased risk of cancer, respiratory disease, and other serious work-related illnesses.
>
> -Although scientists and doctors working at NIOSH wanted to notify workers of the results, NIOSH could not get the funding from the Reagan Administration to do so.

215 Pennsylvania Ave. SE ☐ Washington, DC 20003 ☐ (202) 546-4996

-A NIOSH pilot program at an Augusta, Georgia chemical plant found that as many as 74% of workers exposed to "BNA", a well-documented bladder carcinogen, were unaware of any health dangers connected to the chemical. Subsequent monitoring of these workers revealed that 13 of 586 screened had bladder cancer and the tests of 26 others presented indicia highly suggestive of pre-cancerous changes.

Dr. Wolfe concluded, "these results aptly illustrate that individual worker notification cannot be left entirely to the employer's discretion."

Nor can worker notification be left to the current regulatory system alone:

-There are upwards of 60,000 chemicals currently in commercial use but only about 2000 are covered by OSHA's hazard communication standard and these include only the chemicals used by workers in the manufacturing business. In addition, hazard communications are made only to current, not former, employees.

-OSHA sets standards for very few known toxins, and those standards that do exist are primarily concerned with short-term acute effects. The long-term effects of occupational exposure are almost ignored.

-While NIOSH does make its study results public, individual workers affected by these studies are not necessarily informed. It is of particular importance to notify workers of occupational hazards which apply to them individually (*e.g.*, workers exposed to asbestos who also smoke need to be aware of any increased health danger they face.)

The cost of not warning workers of occupational hazards -- the indispensable first step toward prevention or treatment -- is enormous:

-OSHA has estimated that $11.4 billion in (gross) earnings were lost in 1978 because of disabling occupationally related diseases. Occupational diseases cost the Social Security Disability program about $2.5 billion annually.

-Worker compensation for diseases linked to occupational hazards is less then 3% according to OSHA. This led to the conclusion, in a 1980 OSHA report, that "since few occupational diseases claims are compensated by the workers' compensation system, medical care costs are not provided to most victims of an occupational disease."

The growing problem of exposure to toxins in the work place can only begin to be alleviated by a program of singling out high risk groups and informing them of any medical precautions they can undertake. The resulting lower medical expenses would more than cover the $25 million cost of the bill. More importantly, a great deal of potential pain and suffering can be alleviated by warning and counselling workers at high risk. We therefore ask for your support of S. 79.

Sincerely,

Joseph Goffman

Joseph Goffman
Acting Director
Congress Watch

SIERRA
CLUB
330 Pennsylvania Avenue, S.E., Washington, D.C. 20003 (202) 547-1141

February 12, 1987

Members
United States Senate
Washington, D.C. 20510

Dear Senator,

On behalf of the Sierra Club, we urge you to support S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987. Unfortunately, the death and disablement of workers has been one of the principal means by which we have learned about the toxic properties of chemicals whose release to the environment are being regulated. Currently, 100,000 people die and 340,000 are disabled each year from occupational disease.

S. 79 is designed to identify and help protect those workers who have been exposed to thousands of toxic substances. The concept is to monitor those workers who have received hazardous occupational exposures, detect and treat occupationally induced diseases early before they result in catastrophic disability. S. 79 would establish the first key steps, identifying, notifying and monitoring those workers exposed to toxics in the workplace. Treatment would be provided through existing health care systems. S. 79 could reduce human suffering from this problem dramatically, while simultaneously reducing costs to our health care systems, and ultimately, the taxpayer.

Workers all too often operate as "human guinea pigs" through exposure to high concentrations of toxics in the workplace. We learn from their disease to protect the general population from such hazards. The least we can do for exposed workers is to provide a program for notification, early detection and medical monitoring, as created in S. 79. The Sierra Club urges you to co-sponsor S. 79.

Sincerely,

Michael McCloskey

Michael McCloskey
Chairman

"When we try to pick out anything by itself, we find it hitched to everything else in the universe." *John Muir*

The **Chairman**. Senator Metzenbaum, thank you very much for a very persuasive and compelling statement.

Let me just ask three or four questions, if I may. Number one, are any employers exempted from this? And if so, how is the exemption determined?

Senator **Metzenbaum**. None are exempted at the present time. When I was talking with you yesterday on the Floor of the Senate about the matter, I was actually thinking about another bill.

None are exempted. And when you stop to think about it, there is no real logical reason to exempt any. If there is an occupational hazard, they ought to be covered.

In the Occupational Safety and Health laws that we operate under now, I believe that there is an exemption in certain circumstances for employers of under 10——

The **Chairman**. That is under OSHA. You did make an exemption several years ago for employers of 10 employees or fewer.

Senator **Metzenbaum**. On certain specific activities.

The **Chairman**. How do you assess the job OSHA is doing right now?

Senator **Metzenbaum**. What?

The **Chairman**. How would you assess the job that OSHA is doing? The Occupational Safety and Health Administration.

Senator **Metzenbaum**. I am afraid I could not give it a passing grade. It is a disappointment. An agency that used to do a superb job, and that is capable of doing a superb job, that has the legislative authority to do a good job, I believe has been a let-down in the past several years.

The **Chairman**. What do you think is the greatest occupational hazard American workers face?

Senator **Metzenbaum**. I think I would say that the greatest occupational hazard is the fact that they are exposed to chemicals and various other occupational hazards, and they do not know about it.

They do not know that the fumes that are coming out, the employer knows about it, sometimes the Government knows about it. And I think that the greatest problem that they have is that many times the problem could be solved if only they were put on notice.

Because many exposures are not that serious. There are ways of alleviating the problem. But I think the failure to be placed on notice creates really so many untold deaths and so many untold illnesses that remain over the period of a lifetime.

I think that the greatest risk, and rather than saying it is one particular chemical or one particular kind of toxic fumes, I would say to you the failure to know that the individual has been exposed, so that that individual may take preventive measures, either medical or sometimes even with masks or gloves or whatever. I think that is the greatest risk.

The **Chairman**. Senator Metzenbaum, let us just walk through a hypothetical case of an employer in the furniture business.

He is using lacquers and the paints to paint this furniture. He has had it tested by the scientific community, and he has asked OSHA specifically for information about it.

And he has gotten a clean bill of health on these substances all the way around from the best scientific minds in the Country. He is told that there are absolutely no dangers to the workers who are using these chemicals or this paint or lacquer in painting this furniture.

So he goes on merrily manufacturing furniture and assuming that he is in compliance with the law. And then 10 years later he or the scientific community finds that this can indeed cause brain damage, liver damage, or something else.

And let us assume that there are 500 employees out there who no longer work with him. Are they entitled to notice?

Senator METZENBAUM. Jim Brudney of my staff said he would like the privilege of answering.

The CHAIRMAN. That is quite all right.

Mr. BRUDNEY. Thank you, Senator. The answer is that under the bill, former employees are entitled to notice, to the extent that they can be found on the basis of existing records.

There is no responsibility to create additional records, and it is the Government's obligation to make whatever reasonable efforts they can to notify——

The CHAIRMAN. I am not talking about whether or not he knows who they are and where they are and everything. But technically under the bill they would be entitled to notice that they may have been exposed.

Mr. BRUDNEY. Right. But the notice would be handled to the extent that they could not be located individually through public service announcements.

Senator METZENBAUM. And I think the very important point, Mr. Chairman, is that the employer would have a legitimate concern, and I could think they would be here in droves if they felt that out of this kind of notice, or out of this kind of information, there would be the creation of liability, tort claims, workmen's compensation claims.

We go so far in this bill to make certain that that is not possible.

The CHAIRMAN. Let me make one observation. It is obvious that in the past 10 or 20 years we have discovered that a lot of things we thought were fairly innocuous were not.

We are still uncovering them, and in the future we will find additional substances. I saw something about some baby formula that actually caused brain damage in children.

This was fed to babies, I believe, back in 1977, 1978, and 1979. And NIH has just now discovered that those children are brain damaged.

Senator METZENBAUM. That is my bill, Senator Bumpers, that we passed originally in the Carter Administration requiring that protection be provided if the FDA failed. We now passed new legislation that requires pre-batch testing.

The CHAIRMAN. This is a product case. This is not really a workplace case. But I am just using that example to make my point.

Senator METZENBAUM. I just want to correct the Chairman in this sense. The manufacturer in that instance actually made the change in the formula, withdrew the saline, the salt, and did not provide notice of it.

So in that case you had a deliberate action on the part of the individual. But the point that you are making is that so often we learn after the fact that the lacquers that the furniture manufacturer is using, the paints that he is using, do cause damage.

The **CHAIRMAN**. There can be little doubt that there are a lot of manufacturers out there right now who are just happy as a clam, and have not a hint that anybody working for them may be in danger. But 10 years from now that may change, if science discovers that that is not the case.

Now, let me ask you this question. As a former small businessman, the one bill that I always paid, and believe you me, I had a tough time paying my bills a lot of times—I was on cloud nine when I did not owe as many people as I usually owed—the one bill I always paid first was my workmen's comp bill. We call it workers compensation now.

But in any event, let me walk through another hypothetical case in which an employer has very scrupulously carried workers comp insurance to make sure his workers are protected against hazards in the workplace.

And let us assume that he changed. He has three or four different people covering him over a period of years. Maybe he had USF&G 1 year, and another year he had Hartford or some other company covering him.

Then all of a sudden he finds that he has a couple hundred employees who for the past 20 years have been exposed to a hazardous chemical. What is his role as opposed to the various companies who have insured him against workmen's compensation over the period of time?

Senator **METZENBAUM**. His role is to cooperate with the Federal Government in putting the employee on notice that there has been the exposure.

The **CHAIRMAN**. Then you start monitoring that employee.

Senator **METZENBAUM**. That is right.

The **CHAIRMAN**. Let us assume the doctor finds that he does indeed have precisely what they thought he was going to have, and that is liver cancer.

What is the role of the workmen's comp carrier at that point?

Senator **METZENBAUM**. If there is other evidence that would warrant the claim being allowed, then it would be allowed. But the facts that develop in connection with this matter, that develop under this law, would not be relevant in order to make the claim.

Mr. **BRUDNEY**. If I could just elaborate on that. Under the bill, the fact that the individual was notified and the fact that the board made a determination would in no way be admissible in a workers comp proceeding.

The **CHAIRMAN**. I understand. But if he is going to file the claim against the employer, who has paid premiums all of those years for these companies to protect him against this very thing.

Mr. **BRUDNEY**. And it would be the company's responsibility to protect him, based on whatever the applicable workers comp level——

The **CHAIRMAN**. So the guy comes in and says, look, I have liver cancer because I worked here. Now, that is a matter of proof, before the workers compensation commission and the courts, if it is appealed.

So let me take it one step further. The insurance company is bankrupt. There is nobody left but the employer. What is his responsibility then?

Senator **METZENBAUM**. The company is bankrupt but——

The **CHAIRMAN**. No, no. The workers compensation carrier. The person to whom he has been paying premiums to protect him against this very thing. The insurance company is in bankruptcy.

So who does the employee with liver cancer turn to?

Senator **METZENBAUM**. I think you have generally applicable workers compensation law applicable. And I do not believe that the employer would have any direct liability, if he were providing coverage and paying for the coverage as provided under the law. I do not think there would be any personal responsibility on the part of the employer.

The **CHAIRMAN**. I think most States, and maybe staff or somebody else could elaborate on this, I think most States have what they call a pool or a risk assignment in case a company goes bankrupt, then the employee who has been endangered or who has been hurt or whatever, has a right to collect from the pool.

But I am not sure of that. But I am curious about this particular scenario.

Senator **METZENBAUM**. Well, Mr. Chairman, whatever the rights of the individual are under the law, the applicable law of the State, would not be affected by this legislation. That I think is the critical point.

We are not adding to nor detracting from the individual's rights, nor are we adding to or detracting from the employer's obligations. We are trying to keep it right down the center.

The **CHAIRMAN**. Senator Metzenbaum, have you done any kind of a cost analysis study, or cost impact on business in the bill?

Mr. **BRUDNEY**. We have not done a cost study. There has been considerable testimony. There have been 11 hearings on this bill. Eight in the House and three in the Senate, and there is quite a bit of testimony, both from medical experts and from insurance companies and from businessmen. There is a lot of data in the record.

There has not been a single study and it would not be an easy study to compile.

The **CHAIRMAN**. I agree with that. I do not know how you would arrive at that.

Senator **METZENBAUM**. I think that the reason that we are getting a lot of strong support from the business community and the insurance community is that there is a recognition that if you take certain preventive steps long-range wise, you are going to save a lot of money to the employer or the insurance company, as the case may be.

And I think that is all we are really talking about in this case, and that is preventive. It is almost a kind of preventive medicine, although it is not exactly preventive. But it is preventive in putting somebody on notice so that he or she may take the preventive steps that may be available.

The **CHAIRMAN**. Let me ask you one additional question. What is the role under your bill of the person who manufactured this paint that they sold to the furniture factory?

The worker was actually exposed in the factory. How about the people who manufactured the paint?

Senator **Metzenbaum**. The bill does not add to nor detract from that liability. It does not affect that particular issue, and that is the liability of the paint manufacturer.

You were a practicing lawyer, I was a practicing lawyer. My guess is the paint manufacturer, there might be some liability. But not created by reason of this legislation.

The **Chairman**. But the obligation to notify is on the board.

Mr. **Brudney**. It is on the board. Any employer who wants to assume that obligation, because they determine that they would rather do it themselves is free to do so. And there are standards in the bill.

But no employer has to engage in any notification under this Act, if he or she does not want to.

The **Chairman**. So, presumably the paint manufacturer could also incur some liability to the employee in the case I gave a moment ago in which the employee has cancer of the liver. If he brings suit against the employer, he might also go against the manufacturer, and so on, just as a common law today.

Senator **Metzenbaum**. I think that is right, and I think that is what the average lawyer would do. He would sue anybody and everybody and hope to prove the liability somewhere.

The **Chairman**. One final question. Who pays for the monitoring? Once you notify an employee he is at risk, and you start monitoring, who pays for that?

Mr. **Brudney**. If it is a current employee, and the employer was responsible for the exposure that is at issue, then the employer pays for the monitoring. It is purely diagnostic monitoring.

If it is a former employee, retiree, or a former employee, the employee pays. And if it is an employee for what would be called an innocent second employer, for instance if you worked in an asbestos company and now you work at the post office, the second employer would not pay. The employee would pay.

It is only employers who have actually done the exposing of their current employees who are responsible for monitoring costs for those employees.

The **Chairman**. Well, could I assume then that since most States require workers compensation insurance to be carried, that that would essentially be the financial responsibility of that carrier? The current employee is covered under the workers compensation laws.

Mr. **Brudney**. Well, it might be a matter of health insurance coverage, rather than workers comp insurance, since it is a health cost.

There are a number of employers who have health insurance coverage that includes diagnostic——

The **Chairman**. I am not sure you are right about that. I think when somebody suffers any kind of untoward health problem because of the workplace, it might be that both of them are responsible.

Senator **Metzenbaum**. I am not certain myself. But my guess is that those such as Crum & Forster who have given and spent a tremendous amount of time working on this legislation with us have analyzed that specific issue themselves, because it so much affects them.

And if the Chair does not mind, I would like to urge upon them that they advise the Chairman what the proper answer to that question is.

The CHAIRMAN. Senator Metzenbaum, do you have any idea how many people would be entitled to notice?

Mr. BRUDNEY. How many would be entitled? We do not have an exact figure on that. We know that based on the resources that are in the bill, HHS has estimated that at most 300,000 people could be notified in a given year.

The CHAIRMAN. At most?

Mr. BRUDNEY. At most, 300,000. For the $25 million——

The CHAIRMAN. What do you anticipate the cost to the Government of the bill?

Mr. BRUDNEY. $25 million.

The CHAIRMAN. Do you think that would be a constant figure? Do you think it would be going up each year?

Mr. BRUDNEY. No. The Senate bill calls for 3 years at $25 million. The House bill calls for 5 years at $25 million.

The CHAIRMAN. Senator Kasten.

STATEMENT OF HON. ROBERT W. KASTEN, JR., A U.S. SENATOR FROM THE STATE OF WISCONSIN

Senator KASTEN. I apologize for being late. There are a number of different questions, and people have been writing to us on this legislation. If you covered this before, just tell me and I will pick it up in the record.

The thrust of a lot of the mail that we have received on this legislation has to do with redundancy. In effect, what people are saying is, this is already being done. How do you answer the question in terms of, is this legislation not redundant, and therefore not needed?

Senator METZENBAUM. Let me give you the Senator's answer, and then I will give you the staff answer. The answer is, it is not being done and that just is not factual.

If it were being done there would be no reason for the bill, there would not be such strong support for the legislation from so many in the business community and in the labor community.

Mr. BRUDNEY. I think the argument that the legislation is duplicative is premised on the notion that the hazard communications standard, which is a standard that OSHA recently promulgated, would cover this issue. And there are several responses to that.

First of all there are large numbers of employees in the public sector who are in no way covered by the Hazard Communication Standard. Also, the standard does not cover any former employees, which is a senior omission because occupational disease has long latency periods.

There are hundreds of thousands of employees, former employees, who quit their jobs, who retired, but who were exposed for very long periods of time and could be helped by medical intervention, who would not be covered by the Hazard Communication Standard.

The third issue and perhaps the most critical one is that the Hazard Communication Standard is a workplace warning standard that does not include any medical surveillance component.

This bill calls for a connection to medical monitoring. And the general view of the medical people who have testified on this bill and have helped formulate the bill's position is that notification without medical followup is largely not worthwhile, that you need the medical followup, and that is what the bill provides for.

If I could add just one last thing on the Hazard Communication Standard. The standard has been in litigation for several years. A number of people have been trying to get OSHA to expand its coverage.

Recently the Third Circuit ordered OSHA to extend it to other than manufacturers. And OSHA has still not, several years after it was told to do so, and then ordered to do so, has not indicated that it will do so.

Senator **Kasten**. That is really the question that I was trying to get at. In other words, is the law in place, for lack of a better word, a more aggressive OSHA would solve many of these problems?

Or, is it that the law is not in place and therefore we need a new law in order to give regulators, or give Government employees the opportunity to go out and do some of this work? Do you understand what I am driving at?

Mr. **Brudney**. Yes.

Senator **Kasten**. I do not know if the law is there and we are trying to make sure that the law, the way we in the Appropriations Committee sometimes try to force certain money to be spent.

I cannot tell how much of that you are doing as opposed to establishing a new set of responsibilities, guidelines, and programs.

Mr. **Brudney**. I think the answer is, really, that the law is not in place.

I mean, even if OSHA were to do the things that a lot of people think it is not doing and should be doing, that the Hazard Communication Standard, as written, could not possibly cover the issues, does not cover former employees, which is a large portion of the target group, and it does not have medical surveillance in it.

And those are two very important things. So I think that even if you made the leap that you are suggesting to get OSHA to enforce——

Senator **Kasten**. I do not know. I am just asking the question.

Mr. **Brudney**. Right.

Senator **Kasten**. Thank you, Mr. Chairman.

[Material follows:]

QUESTIONS FROM SENATOR KASTEN AND ANSWERS BY SENATOR METZENBAUM

1. Have you had an opportunity to review the Henry-Jeffords bill? Can you give the Committee your views on that legislation?

A. I have reviewed the Henry-Jeffords bill, H.R. 2278. Although the bill purports to address the issues covered by S. 79, it in fact does nothing more than restate current law and avoid dealing with real problems.

The Henry-Jeffords bill requires that OSHA expand coverage under the Hazard Communication Standard (HCS) to all workers; allows OSHA to update exposure levels on some 400 substances that have not been revised since the early 1970's; permits the Secretary to consider adding medical monitoring recommendations on the basis of additional rulemaking proceedings; permits NIOSH to notify all workers it has studied and whose names and locations are already known; and creates a commission to study risk notification for two years.

This Henry-Jeffords package sounds impressive but the reality is quite different.

-2-

First, OSHA does not need a new bill to expand its coverage under the Hazard Communication Standard. It could do that tomorrow. All it needs is the will and direction. OSHA has been under an order from the Third Circuit Court of Appeals since July 1985 to expand coverage to all workers, and still hasn't done it. In fact, last month that same Third Circuit appeals court gave OSHA 60 days to either publish a proposed expansion or publish its reasons for not doing it.

Second, OSHA currently has the authority to update the exposure levels on those 400 other substances. It does not need this bill.

Third, NIOSH does not need permission to notify formerly studied workers. What it needs is money. Three times, in Fiscal Years 1985, 1986, and 1987, NIOSH requested money to notify the workers it has studied. Each time, the request was rejected by the Reagan Administration.

Fourth, the notification study commission: if there had never been a notification program, I perhaps could understand the necessity for a commission. But that is not the case. NIOSH has conducted several notification programs over the past decade proving that what we are suggesting in S. 79 can be done. A number of unions and private employers have very extensive in-house notification and medical monitoring programs, again demonstrating that a program like S. 79 is workable.

Finally, most importantly, the Henry-Jeffords bill is wholly inadequate on the key functions required under S. 79. The Henry-Jeffords bill does not require notice to workers at-risk; it merely relies on the general labeling provisions of the Hazard Communication Standard (HCS), which make no distinction betwen workers heavily exposed and those not exposed at all. The Henry-Jeffords bill does not require notice to former workers. It merely says that if a former worker requests information concerning the list of hazards covered under the HCS, the employer must provide it. The bill does not require employers to provide medical monitoring to their at-risk employees. It merely says that the Secretary may consider adding medical monitoring information to material safety data sheets on file in an employer's office. In short, the bill makes no provision either to notify at-risk workers of their risk of disease or to provide medical monitoring that will help them cope with that risk.

The Henry-Jeffords bill is unnecessary because both OSHA and NIOSH can perform the activities it would require. The Henry-Jeffords bill is inadequate because it avoids addressing the real issues of risk notification. S. 79 is different. It addresses real needs. It attacks real problems.

2. With the Hazard Communication Standard adopted just last year, we have one of the most extensive regulatory processes under the aegis of the Federal Government. If there has been some disappointment with respect to how OSHA has handled hazard notification, why isn't it a better course to assure that OSHA is effective, rather than to spend even more taxpayer's money and establishing this whole new bureaucracy which seems to be duplicative of the OSHA efforts that are now underway?

A. I do not believe that S. 79 is duplicative of the Hazard Communication Standard. The HCS fails to cover millions of American workers who would be eligible under S. 79. In addition, the HCS approach is fundamentally different from the approach of my bill. I believe my answer to Senator Pressler fully explains my position in this regard, and I attach a copy of that answer.

QUESTIONS BY SENATOR KASTEN AND ANSWERS FROM MR. MALLINO

1. On Page 6 of your written statement you say that Section 9(c) of S. 79 -- the medical removal provisions -- adversely affects small businesses and may have the unintended effect of forcing certain very small businesses into serious economic difficulty.

You are suggesting that small businesses with 10 or fewer workers be exempt from this provision.

I applaud your efforts to take into consideration the special circumstances of small businesses. Can you tell the Committee how you settled on 10 employees as the cut-off point?

1. In the late 1970s, the small business community came to the Congress seeking exemptions from certain provisions of the Occupational Safety and Health Act. They asked for exemptions for businesses with 10 or fewer employees. Through the appropriations process, the Congress granted these exemptions which have been continued in current law. Since the 10 or fewer small business exemptions to OSHA were granted, the small business community has never sought to increase the number and appears satisfied. We, therefore, felt that since the Congress has already decided upon the 10 or fewer limitation that this should be carried over to S. 79.

2. A group of business associations has put together a formula for determining the cost of S. 79 to small businesses -- a copy of which is attached to Mr. Greenbury's statement. The costs are broken down for: notification costs, surveillance/testing; transportation, food and lodging; cost of idle equipment; incremental increase in settlements and judgments (excluding legal fees); and medical removal protection.

The projected cost of this legislation for a very small company (16 employees) is up to $49,921; and for an averaged sized small business (57 employees) is up to $96,669. This does not include costs associated with workers compensation, health insurance, or liability insurance rate changes.

Has the AFL-CIO has done its own cost estimate of the bill's impact on business? Obviously it is not in anyone's interest for this bill to have the effect of putting small companies out of business and thereby losing jobs. Can you tell the Committee if the AFL-CIO agrees with these numbers?

2. The AFL-CIO has not done a cost estimate on the impact of S. 79 on either large or small business and has not yet analyzed the cost estimates in Mr. Greenbury's testimony. It is important to note, however, that many of the cost items contained in Mr. Green's testimony are not new costs since the costs of medical monitoring are already required under most of the OSHA health standards. S. 79 anticipates that the initial populations of workers to be notified will be those who have been exposed to substances already regulated by OSHA and therefore in the near term there would be no new additional costs. In terms of the costs to the government of the notification program, you should note that the bill includes a maximum annual authorization of $25 million, which NIOSH has testified is adequate to notify approximately 250,000 workers.

3. Has the AFL-CIO taken a position on H. R. 2278 -- the Henry/Jeffords bill? If so, what is that position?

3. The Jeffords/Henry bill would require much more business regulation than S. 79 since it would require business to reach back and make available to all former employees the thousands of MSDA sheets required under the OSHA hazard communication standard. Moreover, it would require employers to consult with all workers on medical monitoring. S. 79, on the other hand, only applies to a very narrow, select groups of workers who are known to be at high risk of disease. Perhaps most important, the Jeffords/Henry bill is prospective in nature -- warning workers of a future potential threat to health, whereas S. 79 is designed to deal with workers who have already been exposed and are already at high risk of disease. Finally, Jeffords/Henry does not include medical monitoring other than some vague consultation role. We believe that Jeffords/Henry is much more burdensome on business, especially small business, compared to S. 79 and simply does not address the health problem which is the focus of S. 79. We, therefore, oppose the Jeffords/Henry bill.

4. You say on Page 2 of your statement that "the program does not impose any new burdens on business other than what is already required under the Occupational Safety and Health Act of 1970 and its various health standards."

New burdens certainly are imposed on businesses under Section 9 -- Employee Medical Monitoring. This requires that employers provide monitoring for at risk employees.

Wouldn't you agree that monitoring adds a new burden on businesses?

4. As stated in #2 above, the medical monitoring is already required under most of the 24 OSHA health standards on the books and will be required in any future standards. Those costs are already borne by those small businesses covered by the OSHA standards and therefore, S. 79 would not impose any new costs. You should note that under S. 79, employers have no obligation to pay for medical monitoring of former employees.

QUESTION FROM SENATOR KASTEN AND ANSWER BY MR. BERRINGTON

Question

One aspect of this legislation that concerns me is its effect on our already strained tort system and overburdened courts. The provisions in the bill intended to preclude the use of the notices in liability proceedings is weak and can and will be circumvented by aggressive attorneys who will mine this new area for emotional harm claims and increased allegations against employers outside of the worker compensation systems. The NIOSH Pilot Notification Program in Augusta, Georgia illustrates, in microcosim, the problems of which I speak.

In that NIOSH program, 849 workers who had been exposed to BNA were notified and asked to particpate in a screening program. Only 655 of them chose to participate. Notices were mailed to 1,094 people. What resulted were 171 lawsuits by current and former workers for $335 million. More than 90% of the employees had no physical injury. After untrue allegations based on the notifications, the company having settled about 120 claims totalling about $500,000, and outside groups urging employees to bring suits, the Georgia Supreme Court in 1985, five years after the start of the program finally ruled that the employees had to file occupational disease claims under the state workers' compensation laws.

Such an experience on a national scale would be a catastrophe. Don't you agree?

Answer

The AIA agrees that if the Augusta, GA experience were repeated nationwide the results would be catastrophic.

That such potential exists is undeniable. The bill requires personal notification for workers exposed to an occupational health hazard as long as 30 years prior to the date of the notification. However, no mechanism to locate these employees to provide the notice is given -- and for good reason. No mechanism exists either in the bill or in reality. As a result, the bill invites blanketing the country with notifications, as the Board attempts to compensate for inadequate information about the persons actually exposed.

Once these mass mailings are received nationwide, there undoubtedly will be a resultant explosion of litigation. Whether this will also result in an equally overwhelming explosion of liability is subject to debate, but AIA is convinced that it is impossible, with any language, to wall off the liability potential of the proposed legislation. Across the board, the 30 year search for victims required by the bill will impose great transaction costs on already overburdoned judicial and worker's compensation systems. These costs will add substantially to the production of goods in the United States, making them less competitive with goods produced outside the United State.

These consequences might be somewhat less severe if the notifications were at least based on the best scientific data. But they are not. At the heart of the proposed legislation is the procedure by which the newly created Risk Assessment Board determines which work place exposures constitute hazards that warrant the issuance of notifications. Yet there is no independent check on the Board's decisions to issue notifications and its members are isolated from other health care professionals in both the Departments of Labor and Health and Human Services. Rather than assuring the quality of decisions that result in notifications, the bill exalts speed over care. Artificial time limits to pressure the Board to act quickly are established while full application of the Administrative Procedure Act and the Federal Rules of Civil Procedure are rejected. The bill even goes so far as to allow civil actions to compel the Board to complete its determinations within these predetermined, artificial time limits.

All of this comes at a time when the Department of Labor, through the Occupational Safety and Health Administration, has only recently implemented its Hazard Communication Standard. Designed to protect certain employees from work place hazards through warnings, information, and training, this Standard soon will be expanded to cover all employees. It is this proposed expansion of the Standard coupled with the fact that it has been implemented for only slightly more than a year that makes the rush to create a new bureaucracy all the more frustrating. Instead of building on a system already in place, as the Standard does, the bill creates a new, single purpose bureaucracy whose only measure of success will be the number of notifications issued. It is this measure of success which so clearly heightens the chances of the Augusta, Georgia experience being repeated nationwide with frightening consequences.

QUESTIONS FROM SENATOR KASTEN AND ANSWERS BY MR. BURGER

1. **In your opinion, how well has the Hazard Communication Standard worked in the last year?**

   There does not exist a good evaluation of the working of the Hazard Communication Standard during any of its brief history. OSHA staff believe that objective evaluation is not possible. There does exist a general expression among many that the quantity and quality of information about chemical species, exposures and hazards is improved because of the material safety data sheets. While those documents vary substantially in quality, they do generate some documentation concerning materials used, together with limited information about biological properties. There is some indication that some former worker anxiety over unknown exposures has been replaced by more informed worker questions about health and employment settings. I am not aware of any associated increase in litigation.

   I am advised that OSHA has identified approximately 20,000 violations of the rule since 1985.

2. **It is my understanding that OSHA is in the process of expanding the scope of coverage of the Standard to all workers exposed to hazardous chemicals. What changes would you recommend to the standard?**

   Expanding coverage to workers in general (manufacturing and services) probably makes sense but may have diminishing returns the farther downstream the notification process extends.

3. **If these changes were made, would S.79 really be necessary?**

Both the OSHA provisions and S.79 seek to apprise workers of workplace hazards. However, they deal with somewhat different aspects. The OSHA provisions provide information about exposures (or potential exposures) together with a bit of information about the biological properties and implications for human health of those exposures. S.79 originated from a concern for the proper use of data generated from epidemiological studies performed in the workplace. (The resulting legislative proposals further extended the reach of this activity by proposing to trigger a notification process on the basis of a variety of types of information, thereby diminishing the usefulness of the process.)

I believe that a substantially altered and differently administered hazard communication process could theoretically serve both purposes. It would necessarily have to be fashioned so as to assure the quality of the scientific factual information upon which a decision to notify is based. It would have to accommodate and analyze information both about exposures and the results of selected epidemiological studies and it would have to attend with great care to the medical, ethical and social consequences of notification.

4. **Currently, all employers are required to maintain and provide employees access to records of employee exposure and medical surveillance. . . . . In your opinion, how effective is Access to Employee Exposure and Medical records?**

OSHA staff have no objective measures and believe that these are probably not possible in any rigorous sense.

I am advised that the United Automobile Workers and the Ford Motor Company have combined to develop a somewhat enhanced procedure for hazard communication and worker access to information. The University of Michigan School of Public Health is responsible for performing some evaluative studies. When completed, these studies might provide some useful insight.

5. **Isn't S.79 redundant? Don't these rules sufficiently protect workers? If not, why not?**

Both the OSHA rules for hazard communication and access to medical records and the provisions of S.79 appear to serve two nominal goals. One of these is protection of health and identification of opportunities for preventive intervention. The other is worker right-to-know. It will probably be difficult to point to very many instances of improvement in health as a result of either of these provisions. In my opinion, S.79 will not offer any more opportunities to protect or improve health. The second goal, worker right-to-know, will be supported in both cases. However, at the same time that information is provided, great care must be taken not to do more harm than good by raising tentative or false signals about health and risks to health, which is a substantial likelihood of the present version of S.79.

The **Chairman**. Thank you. Senator Pressler. Senator Pressler, I do not want to cut anybody short on questions. But we are really going to run into a time bind.

I do not want to cut anybody off on the questioning, but I do want to point out that Senator Sasser is going to relieve me, but he can only stay till 12, and then I am trying to find somebody to take it after that.

STATEMENT OF HON. LARRY PRESSLER, A U.S. SENATOR FROM THE STATE OF SOUTH DAKOTA

Senator **Pressler**. Let me first of all commend Senator Metzenbaum and others for raising this important issue.

In the Environment and Public Works Committee we recently had a hearing chaired by Senator Mitchell regarding indoor pollution in buildings, which I had not realized was a problem. Some of the fanciest office buildings and high rises can have a great deal of indoor pollution.

This is perhaps more of a problem for white collar workers, rather than blue collar workers, but it can apply to both.

Is this part of your concern? Or would this be a little bit farfetched?

Senator **Metzenbaum**. I think it is covered in the totality of the picture. I do not think it is where we started originally.

But I certainly believe that the environmental or occupational exposure that white collar workers receive by using some of the new equipment that is being used, or for other reasons, certainly is a matter of concern.

Whenever an employee suffers an occupational exposure, the bill really says employees are entitled to be notified and be put on notice that there is a problem, period. And then for the medical monitoring.

Senator **Pressler**. In your second paragraph, you stated that between 50,000 and 100,000 Americans die from diseases caused by on-the-job exposure to toxic chemicals, wastes, fumes, dusts, or industrial processes.

It would be of great interest to me to get a breakdown of what is causing those deaths and how the numbers are arrived at. If you could supply that for the record, I think it would be very interesting.

Senator **Metzenbaum**. We would be very happy to provide it.

[Material follows:]

SENATOR METZENBAUM'S RESPONSE TO SENATOR PRESSLER'S ORAL QUESTION

During my testimony, Senator Pressler asked for a breakdown as to what occupational diseases are primarily responsible for the 50,000 to 100,000 deaths that occur each year as a result of exposure to occupational health hazards. I am happy to provide that information.

The most recent detailed data of which I am aware comes from New York State. In February of this year, the Division of Environmental and Community Medicine at Mount Sinai Hospital in New York City submitted a report to the New York State Assembly entitled "Occupational Disease in New York State." The report concludes that

> "...no fewer than 5,000 deaths result in New York State from occupational cancer, pneumoconioses (dust diseases of the lung), cardiovascular diseases, chronic respiratory diseases, renal (kidney) diseases, and neurologic disorders. It is probable that this estimate is too conservative and that the true number of work-associated diseases is 7,000 or higher.... In addition, it is estimated that at least 35,000 new cases of occupational illness develop each year in the state."

The report goes on to estimate that, in terms of occupational disease mortality in New York State, some 3,700 deaths result from cancer, 170 from pneumonoconioses, 41-123 from chronic respiratory disease, and 912-2,736 from cardiovascular disease, renal disease, and neurologic disorders. I have attached the Report's title page and pages 6-18 as part of my response.

New York State includes approximately 8% of the working population in the U.S., and also includes a reasonable cross-section of the working population (e.g. manufacturing, agricultural, construction, services, mining). Accordingly, multiplying the New York figures by 12, one would expect nationwide occupational disease mortality to fall within a range of between 60,000 and 84,000 annual deaths. National data estimating occupational disease incidence on an industry-by-industry basis also is included in the New York State Report at page 13.

OCCUPATIONAL DISEASE IN NEW YORK STATE

Proposal for a Statewide Network of Occupational Disease Diagnosis and Prevention Centers

Report to the New York State Legislature

February, 1987

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Chapter 2

Occupational Disease in New York State

SUMMARY: No complete and reliable source of information on work-related disease exists at present in New York State. The best available data indicate, however, that no fewer than 5,000 deaths result each year in New York State from occupational cancer, pneumoconioses (dust diseases of the lung), cardiovascular diseases, chronic respiratory diseases*, renal (kidney) diseases, and neurologic disorders. It is probable that this estimate is too conservative and that the true number of work-associated deaths is 7,000 or higher. Occupational disease is thus the fourth most frequent cause of death in New York. In addition, it is estimated that at least 35,000 new cases of occupational illness develop each year in the state.

These figures, despite being conservative, clearly indicate that occupational disease is a major public health problem. The estimates are low because they are based on information from data collection systems that consistently under-report occupationally-related disease and deaths. The limitations of these data collection mechanisms are discussed; suggestions to strengthen them are made in Chapter 10.

Occupational exposures are responsible each year for more than 35,000 new cases of disease and for an estimated 5,000-7,000 deaths in New York State. These are conservative estimates based on currently available data for a limited number of occupational disease categories. Because there is no single source of complete or comprehensive information on work-related diseases, the true magnitude of the occupational disease burden in New York State cannot be determined precisely. Nevertheless, the available data are sufficient to demonstrate that occupational disease constitutes a public health problem of significant magnitude.

Estimates of work-related mortality (deaths) and morbidity (illness) were developed from four sources of data: the statewide Workers' Compensation programs, employers' reports mandated by OSHA, disease and laboratory-based registries maintained by the State Department of Health, and physicians' reports. These programs are not coordinated and do not exchange information. Each source of information is incomplete and each has its serious limitations.(1-5)

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*Emphysema, asthma, bronchitis, bronchiectasis and allergic alveolitis.

The first section of this chapter summarizes the available morbidity and mortality data and the procedures used to develop annual estimates of disease and death. The second section describes each source of information in detail and examines its strengths and weaknesses.

ESTIMATES OF DEATH AND DISEASE

Mortality (Deaths)

In Table 2-1, two estimates of deaths due to occupational disease in New York State are presented.

By our calculations, between 4,686 and 6,592 deaths occur each year in New York State as the result of occupational exposures (column 4). However, according to New York State Workers' Compensation data, only 233 work-related deaths occur annually (column 5). The estimated number of deaths associated with occupation (column 4) was generated using a proportional attributable risk approach. To obtain the number of deaths attributable to each category of disease, the percentage of each cause of death estimated to result from occupational exposures (column 3) was multiplied by the average number of deaths from that cause occurring each year in New York State (column 2). In the case of cancer, an average of 37,081 deaths occur in New York State each year. Analysis of the available literature indicates that 10% of these deaths result from occupational exposures (Appendix 1). Multiplying the 37,081 total cancer deaths by 10% results in an estimate of 3,708 occupationally-related cancer deaths.

By this same approach, attributing 10% of cancer deaths, 100% of deaths from pneumoconioses, and 1-3% of cardiovascular, chronic respiratory, renal and neurologic deaths to occupation, between 4,686 and 6,592 of the approximately 167,000 annual deaths in New York State may be ascribed to occupational disease.

This range of estimates is considered conservative, i.e., it provides a low estimate of total occupational mortality. A low estimate is generated because proportional risks were applied to deaths from only six conditions: cancer, pneumoconioses (dust diseases of the lung), cardiovascular disease, chronic respiratory (lung) disease, neurologic illness, and renal (kidney) disease. Furthermore, in each case, conservative proportional risk estimates were selected from the range of figures available. A detailed discussion of the rationale for selecting each percentage is included in Appendix 1.

TABLE 2-1

Occupational Disease Mortality Estimates

		Estimated Proportion and Number of Deaths Associated With Occupation		
(1) Cause of Death	(2) Average Total Annual Mortality, NYS 1979 - 82	(3) Percent	(4) Number	(5) Average Annual Occupational Disease Deaths Reported by Workers' Compensation
Cancer	37,081	10%	3,708	3
Pneumoconioses	25	100%	25	34
Chronic Respiratory Disease	4,104 *	1-3%	41 - 123	3**
Cardiovascular Disease, Renal Disease and Neurologic Disorders	91,213	1-3%	912 - 2,736	176
Other Conditions	34,631	—	—	17
TOTAL	167,054	—	4,686 - 6,592	233

*Includes emphysema, asthma, bronchitis, bronchiectasis and allergic alveolitis (ICD 490-496)

**Includes all non-toxic respiratory system conditions

Sources: Vital Statistics of New York State, 1979-1982; Compensated Cases Closed, State of New York Workers' Compensation Board Division of Research and Statistics, Bulletins Nos. 40-43, 1979-1982.

The second set of numbers in Table 2-1 (column 5) is the average number of occupational disease deaths reported annually by the New York State Workers' Compensation Board between 1979 and 1982. During that time, Workers' Compensation reported an average of 233 occupational disease deaths per year.* As will be discussed in detail below, it is estimated that the actual number of occupationally associated deaths is at least 6-33 times greater than this number reported by the Workers' Compensation Board. It is remarkable that even if Workers' Compensation reports of cancer deaths were increased by a factor of 10, the resulting estimate of 30 cancer deaths would be negligible and is clearly an enormous underestimate. Thirty cancer deaths represents less than one-tenth of one percent of cancer deaths in the State, 25 times less than the lowest estimates of occupational cancer to be found in the medical literature.

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*All non-traumatic accidental conditions have been incorporated into the disease category (e.g., heart attacks and infectious diseases are included under "diseases").

With the exception of the information on pneumoconioses, the estimates in Table 2-1 of occupational disease mortality based on proportional attributable risk are substantially more realistic than the Workers' Compensation estimates. Pneumoconioses are often misdiagnosed on death certificates. Hospital discharge data for New York State suggest that pneumoconioses may develop 5 to 10 times more often than reported (see page 11 and Table 2-4). If the 34 deaths due to pneumoconioses reported by Workers' Compensation are multiplied by 5 to reflect this undercounting, a composite estimate of approximately 4,800-6,800 annual occupational disease deaths is obtained for New York State:

Estimated Annual Occupational Disease Deaths

Cancer	3,708
Pneumoconioses	170
Chronic respiratory disease	41 - 123
Cardiovascular, renal, and neurologic disorders	912 - 2,736
TOTAL	4,831 - 6,737

It is important to consider these figures in the context of data on overall mortality. There are 167,000 deaths in New York State each year. The estimated 5,000-7,000 deaths attributable to work-related exposures constitute 3-4% of total deaths, making occupational disease the fourth most common cause of death in New York. Only heart disease, cancer and stroke cause more deaths each year than occupational disease. Every year, twice as many people die from work-associated diseases as die from homicide and suicide combined; 1.5 times as many people die from occupational disease as from accidents, and more than twice as many residents of New York State die from work-related conditions each year than have died from AIDS since that disease was first identified in 1981. Clearly, occupational disease is a major health issue.

Morbidity (Illness)

In all disease surveillance systems, reporting of fatal conditions is more complete than reporting of less severe conditions. As a result, estimates of non-fatal occupational illness are even less precise than those for mortality.

Tables 2-2 through 2-7 present the results of three approaches to the estimation of occupational disease morbidity in New York State, based on (1) Workers' Compensation records, (2) employers' reports and (3) physicians' reports.

Workers' Compensation, Registry and Hospital Discharge Data

Table 2-2 shows the distribution of diseases and the average number of new cases of non-fatal occupational illness reported annually by the New York State Workers' Compensation Board. As discussed below, these figures represent cases of occupational disease that were compensated by the Workers' Compensation Board, not all claims submitted to the Board.

TABLE 2-2

Occupational Disease Morbidity Reported by the New York State Workers' Compensation Board, 1979-1982 Annual Averages

Condition	Average Annual Workers' Compensation Awards, NYS 1979-1982
Infectious and Parasitic Diseases	156
Cancer	6
Mental Disorders	67
Nervous System and Sensory Organ Conditions:	
Hearing Loss	627
Eye Disease	20
Other	168
Circulatory System Diseases:	
Heart Attacks	446
Stroke and Other	34
Respiratory System Diseases:	
Pneumoconioses:	
Asbestosis	14
Silicosis	28
Other	10
Other Respiratory Conditions	93
Musculoskeletal System Conditions	968
Accidental Poisonings	447
Skin Diseases	639
Other	42
TOTAL	3,765

Sources: Compensated Cases Closed, State of New York Workers' Compensation Board, Division of Research and Statistics Bulletins Nos. 40-43, 1979-1982.

The total of 3,765 new cases reported by Workers' Compensation is by far the lowest of the three illness estimates to be presented. Easily recognized acute conditions, such as skin disease and musculoskeletal conditions, are relatively over-represented: chronic disease is under-reported. Only 6 cases of work-related cancer were compensated annually.

The tremendous underestimation involved in these figures is apparent from consideration of data from alternate sources of information, for example, data on accidental poisonings and pneumoconioses. While Workers' Compensation (1979-82) recorded an average of 446 cases of systemic poisoning, the State Heavy Metals Registry (Table 2-3) reported 575 cases of elevated blood lead levels alone in 1985, and a total of 1,061 cases of excessive absorption of lead, mercury, arsenic and cadmium.

An average of 52 individuals received Workers' Compensation benefits for pneumoconiosis each year between 1979 and 1982. Yet, according to the Statewide Planning and Research Cooperative System (SPARCS) data, 599 men were hospitalized for pneumoconioses in New York State in 1985 alone (Table 2-4). Hospital discharge data may include more than one hospitalization per person and not all hospitalizations will be for new cases. However, because only the most severe cases require hospitalization, and thus represent only a small proportion of all cases of the disease, it is reasonable to assume that the discharge data provide a more accurate picture of pneumoconiosis prevalence in the state than do Workers' Compensation data.

TABLE 2-3

Comparative Frequency of Occupational Heavy Metals Poisonings Reported
by the Workers' Compensation Board and the NYS Heavy Metals Registry

Metal	NYS Heavy Metals Registry Reports 1985	Average Annual Workers' Compensation Awards for Systemic Poisonings, 1979-1982
Lead	575	
Mercury	454	
Arsenic	30	
Cadmium	2	
TOTAL	1,061	446

Sources: New York State Heavy Metals Registry 1985; Compensated Cases Closed, State of New York Workers' Compensation Board, Division of Research and Statistics Bulletins Nos. 40-43, 1979-1982.

TABLE 2-4

Pneumoconiosis Cases Reported by the Statewide Planning and Research Cooperative System (SPARCS) and the NYS Workers' Compensation Board

Pneumoconiosis	Average Annual Hospital Discharges 1980-1985	Average Annual Workers Compensation Awards, 1979-1982
Asbestosis	210	14
Silicosis	298	28
Other	91	10
TOTAL	599	52

Sources: Statewide Planning and Research Cooperative System data; Compensated Cases Closed, State of New York Workers' Compensation Board, Division of Research and Statistics, Bulletins Nos. 40-43, 1979-1982.

Employers' Reports/Bureau of Labor Statistics Data

Table 2-5 provides an indication of the number of new cases (incidence) of occupational disease reported to the Bureau of Labor Statistics (BLS) in 1984 by non-governmental employers in New York State for each of the major employment categories. The estimate of 11,687 new illnesses was obtained by multiplying the U.S. incidence rate for each industry by the number of workers employed in that industry in New York State in 1984.

Table 2-6 illustrates the distribution of new cases of occupational disease by health condition. The two conditions reported most frequently by employers were skin diseases and musculoskeletal conditions. The Bureau of Labor Statistics data upon which this estimate is based are limited almost entirely to easily recognizable, acute conditions and include virtually no cases of cancer or of other chronic occupational disease.

TABLE 2-5

Estimates of Occupational Disease Incidence By Industry
Based on 1984 Bureau of Labor Statistics Data

Industry	U.S. Rate of New Cases Per 10,000 Workers, 1984	New York State Employees, 1984	Estimated Number of New Cases of Occupational Disease in NYS, 1984
Agriculture, Forestry and Fishing	43.8	95,000	416
Manufacturing			
Durable Goods	38.6	736,400	2,843
Non-Durable Goods	38.4	589,900	2,265
Construction	16.3	255,200	416
Services	14.1	1,966,100	2,772
Mining	13.0	6,800	9
Transportation and Public Utilities	11.8	418,500	494
Government	9.0 *	1,318,200	1,186
Wholesale and Retail Trade	6.5	1,576,900	1,025
Finance, Insurance and Real Estate	3.7	704,400	261
TOTAL	15.2	7,667,400	11,687

* BLS data exclude government employees. This rate is the average of the rates for employees in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance and real estate; services.

Source: Occupational Injuries and Illnesses in the United States by Industry, 1984. US Dept. of Labor, Bureau of Labor Statistics, Bulletin 2259, May 1986.

TABLE 2-6

Estimates of Occupational Disease Incidence by Illness
Based on 1984 Bureau of Labor Statistics Data

Condition	Estimated Number of New Cases in New York State, 1984
Skin Diseases or Disorders	4,056
Disorders Associated with Repeated Trauma	2,675
Respiratory Conditions Due to Toxic Agents	1,052
Disorders Due to Physical Agents	832
Poisoning	465
Dust Diseases of the Lung	139
All Other Occupational Illnesses	2,468
TOTAL	11,687

Source: Occupational Injuries and Illnesses in the United States by Industry, 1984. U.S. Department of Labor, Bureau of Labor Statistics, Bulletin 2259, May 1986.

Physicians' Reports

California is unusual among the states in requiring physicians to report all cases of occupational disease treated, and in publishing the resulting information.* Table 2-7 uses data from California physicians' reports to estimate the frequency of occurrence of occupational illness in New York State.

By this approach, it is estimated that 27,985 new cases of occupational disease occur in New York State each year. To develop this estimate, disease-specific California incidence rates were multiplied by the total number of workers in New York State. For example, in 1983, there were 12.2 new cases of work-related skin disease reported by physicians for every 10,000 workers. If workers in New York (7,667,300) developed skin conditions at the same rate (12.2 per 10,000) as workers in California, 9,354 new cases of skin disease would be expected to develop each year (12.2 x (7,667,300 ÷ 10,000) = 9,354).

TABLE 2-7

Occupational Disease Incidence Estimates Based on California "Doctors' First Report" Data, 1983

Condition	New Disease Rate Per 10,000 California Workers[1]	Estimated Number of New Cases, New York State, 1984[2]
Skin Conditions	12.2	9,354
Eye Conditions	11.2	8,587
Systemic Poisonings	3.0	2,300
Respiratory Conditions	3.0	2,300
Chemical Burns	2.4	1,840
Exposures to Toxic Materials	0.7	537
Ear Conditions	0.6	460
Circulatory System Conditions	0.6	460
Other	2.8	2,147
TOTAL		27,985

[1] Occupational Disease in California 1983. State of California Department of Industrial Relations, Division of Labor Statistics and Research, San Francisco, California, September 1985.

[2] There were 7,667,300 workers in New York State in 1984 (NYS Department of Labor).

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*The "Doctors First Report of Injury or Illness," from which the California incidence rates were calculated, encompasses first treatments given for all work-related conditions.

The distribution of new cases of disease reported by physicians (Table 2-7) is quite similar to that of diseases reported by employers (Table 2-6). The almost 28,000 illnesses estimated on the basis of physicians' reports include primarily acute conditions, especially skin diseases, and almost no cases of cancer.

The morbidity estimates presented in Tables 2-2 to 2-7 range from a low of 3,765 cases to a high of 27,985 cases. Since all of these estimates exclude occupational cancer, the range should more properly extend from 10,345 to 34,565* new cases of work-related disease each year. The 34,565 figure is probably more accurate as it is based on physician reporting; nevertheless, because the occupational origin of work-related illness is so often overlooked by both physicians and workers, even this figure remains a very conservative estimate of the problem.

SOURCES OF DATA

Workers' Compensation

The Workers' Compensation system provides an intuitively appealing and widely employed resource for surveillance of occupational disease. Unfortunately, Workers' Compensation records were not designed for the purpose of disease surveillance and produce a significant underestimate of the number of people actually affected by occupational disease, as well as a misleading picture of the pattern of occupational illness. For example, the New York State Workers' Compensation system reported an average of only three work-related cancer deaths per year between 1979 and 1982, a result which suggests that the occupational cancer problem is insignificant. In 1979, however, there were approximately 80 mesothelioma deaths alone in New York State.(6) Mesothelioma is a relatively rare cancer of the lining of the lung or abdominal cavity which is caused in virtually all cases by occupational exposure to asbestos. If the more commonly occurring work-related cancer deaths were added to the mesothelioma deaths, it would be patently clear that occupational cancer deaths constitute a serious problem in New York. The magnitude of the problem is not apparent, however, from a review of Workers' Compensation statistics.

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*This assumes that 10% of the 65,800 new cases of cancer that develop in New York State each year are work-related.

Workers' Compensation claims and data are biased toward easily recognizable acute conditions, they tend to exclude those work-related conditions that have a long latency period between exposure and the development of clinically recognizable illness, as well as those that result from long-term, low level exposures. In addition, the Workers' Compensation system does not cover 100% of the workforce. The extent of workforce coverage varies from locality to locality. In New York City, for example, teachers, Board of Education employees, and the uniformed services (police, firefighters and sanitation workers) are excluded. In Upstate New York, coverage for most state and local government employees, the self-employed, and part-time domestic workers is not mandatory.(7)

The New York State Workers' Compensation Board maintains data on only those claims that receive compensation benefits, not on all claims submitted. As a result, it is not possible to determine what proportion of occupational illness cases submitted are finally judged to be work-related. No information is available on the nature or frequency of claims rejected or withdrawn. This point is significant because approximately 60% of occupational disease cases submitted to Workers' Compensation are initially rejected, requiring a formal or informal hearing, usually to resolve questions of work-relatedness. By comparison, only 10% of the accident claims are contested.(5)

Estimates of the magnitude of the underestimate that results from use of Workers' Compensation data vary widely: a U.S. Department of Labor study indicated that, nationally, only 5% of workers severely disabled by occupational disease received compensation benefits.(5) Discher and colleagues in Washington State found that 3% of occupational disease victims submitted claims to Workers' Compensation.(8) Selikoff observed that less than one-third of a cohort of New York-New Jersey insulation workers disabled by asbestos-related disease submitted compensation claims and only 15% received benefits prior to their deaths.(9) Stark, of the New York State Department of Health, reported that the number of New York State Workers' Compensation claims for lead poisoning in one year represented less than 1% of the reports to the New York State Heavy Metals Registry of elevated blood-lead levels in men.(10) In the best of cases, then, Workers' Compensation records include no more than one-sixth of all illnesses; in the worst case, they may underestimate the problem by a factor of 30 or more.

OSHA/Employers' Reports

The Bureau of Labor Statistics (BLS) of the U.S. Department of Labor publishes national incidence rates for occupational illness and injuries, based on the OSHA-mandated records maintained by non-governmental employers. This system primarily records data on those conditions resulting from acute exposures, missing those with long latency periods and those arising from chronic exposures.(2) Thus, for example, the number of occupationally induced cancers recognized through this system is so small that cancer is included in the "all other occupational illnesses" category.

Physicians' Reports

California has established a physician-based system for collecting occupational disease data. Doctors are required to submit a report to the State Department of Labor for every occupational injury or illness treated. California's program offers an alternative perspective on the occupational disease problem, but its potential value in providing a comprehensive overview of incidence is limited by: (a) lack of adequate training among physicians to assure that they will recognize the occupational origins of disease, and (b) exclusion of retired workers from the data collection system.

Although the California system records a much greater volume of disease than either the Workers' Compensation Board or the Bureau of Labor Statistics, the pattern of disease reported is similar. The lack of reports on occupational cancer undoubtedly reflects the impact of excluding retired workers from the system and the lack of familiarity, among both physicians and workers, with associations between occupational exposures and subsequent diseases. In this regard, the physician-based strategy suffers from the same deficiencies as the employers' reporting system.

In summary, existing sources of occupational disease data provide only fragmented and unreliable information. Occurrence is underreported for a variety of reasons, including employees' fear of losing their jobs, employers' fear of legal and financial liability, lack of physician recognition of the occupational origin of a patient's condition, the fact that workers often are not aware of or cannot remember their exposure to dangerous materials, and the frequently long period that elapses between exposure and the development of symptoms of disease.

Because available data sources do not provide accurate information on the volume and types of occupational disease, alternate approaches to estimating the problem have been proposed. The most frequent suggestion is that estimates of the proportion of total illness and mortality due to occupational exposures, i.e., the "occupational fraction," be applied to overall morbidity (illness) and mortality figures. Unfortunately, estimates of the occupational fraction have been developed for very few conditions, primarily cancers, and the estimates vary widely. Even Doll and Peto, authors of one of the best known and most detailed occupational cancer estimates, remark "On present knowledge... it is impossible to make any precise estimate of the proportion of the cancers of today that are attributable to hazards at work (let alone how many future cancers may arise from past occupational exposure during the years before 1980), and none of the estimates that have been made are claimed to be anything more than informed guesses." (11)

This lack of accurate information seriously restricts the ability to organize and implement control programs for occupational disease.

CONCLUSION

The four principal sources of information on the frequency and nature of occupational illness and deaths in New York State are Workers' Compensation Board records, the employer reports required by the Occupational Safety and Health Administration, disease registries, and physicians' reports. In New York State, as elsewhere, there is little or no coordination among these sources, and the data they provide are fragmentary and unreliable. The occurrence of occupational disease is under-reported for a variety of reasons, including workers' fear of losing their jobs, employers' fear of legal and financial liability, lack of recognition by physicians of the occupational origin of a patients' condition, the fact that workers are often unaware of or cannot recall their exposure to dangerous materials, and the often long latency period that elapses between exposure and the development of recognizable symptoms of disease.

To develop information on the magnitude and characteristics of the occupational disease burden in New York State, estimates of work-related mortality (deaths) and morbidity (sickness) were derived from four data sources. It is estimated conservatively that there are approximately 5,000-7,000 deaths each year in New York State from occupational cancer, pneumoconioses (dust diseases of the lung), cardiovascular diseases, chronic respiratory (lung) diseases, renal (kidney) diseases and neurologic disorders. Thus, occupational disease is the fourth most frequent cause of death in New York State, exceeded only by heart disease, cancer, and stroke. In addition, it is estimated that at least 35,000 new cases of occupational disease develop each year in New York State.

While the available data on occupational disease are limited, they are sufficient to demonstrate that occupational disease is a serious problem in New York State. Resolution of the problem will require the development of better data collection mechanisms and the formulation of a statewide plan for the prevention and control of these preventable diseases.

1. Barth, P.S. Workers' Compensation for Occupational Disease in New York State. In Research Papers of the Temporary State Commission on Workers' Compensation and Disability Benefits Albany, NY: April 1986.

2. Barth, P.S. with H.A. Hunt. Workers' Compensation and Work-Related Illnesses and Diseases Cambridge, MA: MIT Press, 1980.

3. Occupational Illness Data Collection: Fragmented, Unreliable, and Seventy Years Behind Communicable Disease Surveillance Sixtieth Report by the Committee on Government Operations. House Report 98-1144, October 5, 1984.

4. Occupational Health Hazard Surveillance: Seventy Two Years Behind and Counting Sixty-first Report by the Committee on Government Operations. House Report 99-979, October 6, 1986.

5. United States Department of Labor. An Interim Report to Congress on Occupational Diseases June 1980.

6. New York State Department of Health, Bureau of Cancer Control.

7. New York State Workers' Compensation Board, Legal Department, personal communication, January 1987.

8. Discher, D.P., G.D. Kleinman and F.J. Foster. Pilot Study for the Development of an Occupational Disease Surveillance Method HEW Pub. No. (NIOSH) 75-162. Washington, DC: US Government Printing Office, May 1975.

9. Selikoff, I.J. Disability Compensation for Asbestos-Associated Disease in the United States New York: Mount Sinai Press, 1982.

10. Stark, A., Director, New York State Department of Health, Bureau of Environmental Epidemiology and Occupational Health, personal communication, October 1986.

11. Doll, R. and R. Peto. The Causes of Cancer: Quantitative Estimates of Avoidable Risks of Cancer in the United States Today. Journal of the National Cancer Institute 1981; 66: 1191-1308.

Senator **Pressler**. I have some additional questions for you and some for Mr. Swain. The Commerce Committee is dealing with foreign investment this morning, and the Foreign Relations Committee is dealing with selling arms to Saudi Arabia. So I am spread rather thin.

The **Chairman**. As I said before you got here, I do not know why Senators fight for more committee assignments when we cannot take care of the ones we have now.

Senator **Pressler**. That is correct.

The **Chairman**. I was chastising myself. Not you.

Senator **Pressler**. I ask unanimous consent to submit questions for Mr. Swain, Mr. Mallino, and Senator Metzenbaum for the record.

The **Chairman**. Without exception, we would request all of you to respond to those questions at the earliest possible time.

[The prepared statement of Senator Pressler follows:]

OPENING STATEMENT BY SENATOR PRESSLER
SENATE SMALL BUSINESS COMMITTEE
HEARING ON S. 79, THE HIGH RISK
OCCUPATIONAL DISEASE NOTIFICATION AND
PREVENTION ACT OF 1987
JUNE 10, 1987

Mr. Chairman, I would like to thank you for calling a hearing to examine the provisions of the High Risk Occupational Disease Notification and Prevention Act of 1987.

Many workers in our country are employed in positions which require the use or handling of hazardous materials. These workers have the right to expect that every effort is made to provide accurate information on these materials, such as the health risks that could result from exposure and the proper handling of the materials. Without an efficient communication network to notify employers and workers of identifiable health risks, many people may be unknowingly placing their health in jeopardy.

The requirements for notification and prevention of occupational diseases must be stringent to ensure maximum safety of America's workers. However, I believe these requirements should be carefully scrutinized to prevent the placement of unreasonable burdens on employers, particularly small businesses. Some concerns about the impact of the High Risk Occupational Disease Notification and Prevention Act of 1987 on this group of employers have been raised, concerns which I believe deserve our attention. For example, a small business may not have the resources to continue to provide wages and benefits to an employee who has been exposed. The business' operation may not be diversified enough to offer the exposed employee a less hazardous position. The tremendous financial burden this requirement could create for small businesses could threaten their ability to stay in business.

I would like to thank the witnesses who will be presenting testimony today on the efficiency of the current Hazard Communication Standard, the possible need to strengthen these regulations, and the impact of these regulations on small businesses. The important information shared at this hearing today may contribute to a safer environment for America's workforce.

SENATOR PRESSLER'S QUESTION AND MR. SWAIN'S ANSWER

Question

UNDER THIS LEGISLATION, EMPLOYEES ARE RESPONSIBLE FOR PAYING THE COSTS OF TESTING AND REGULAR MEDICAL MONITORING UNLESS THEY OFFER A GROUP HEALTH PLAN WHICH COVERS SUCH TESTS. DO YOU HAVE ANY FIGURES ON THE PERCENTAGE OF SMALL BUSINESSES WHICH DO NOT OFFER HEALTH PLANS TO THEIR EMPLOYEES?

Answer

The Office of Advocacy commissioned a study from ICF, Incorporated to examine health care coverage and costs by firm size. The study found that small employers are less likely than large businesses to provide health insurance coverage for their workers. Approximately 45 percent of firms with fewer than 100 employees do not offer coverage while in larger firms health coverage is nearly universal. Approximately 8.2 million or 26 percent of nonfarm workers do not have health insurance. Of these working uninsured, 6 million, or almost 75 percent, are in firms with under 500 workers with the majority employed in firms of fewer than 25 employees. In addition, another 1.6 million business owners, primarily sole proprietors, are uninsured.

SENATOR PRESSLER'S QUESTIONS AND SENATOR METZENBAUM'S ANSWERS

1. Under your bill, employers are prohibited from discriminating against employees and applicants who have been notified of risk. My question concerns the applicants.

Are you concerned that employers might use other excuses during the interview process to ensure the person hired has not been found to be at risk?

Are we risking subjecting the very class of individuals this legislation is designed to help to potential discrimination at the application level?

A. S. 79 protects employees exposed to hazardous substances in the workplace through identification, notification and follow-up monitoring. To prevent unscrupulous employers from subverting the purpose of the legislation, I have included a provision that prohibits employers from discriminating, not only against employees who are known to be at risk, but also against at-risk individuals who are applicants for employment. Antidiscrimination protection for job applicants is a regular feature of our civil rights laws. To take just two examples, Title VII of the 1964 Civil Rights Act and the Age Discrimination in Employment Act of 1967 each prohibits discrimination against job applicants as well as employees. These statutes have been effectively enforced with respect to applicants for nearly two decades. I see no reason why the antidiscrimination provision of S. 79 should be any less effective in this regard.

2. As you know, OSHA has promulgated employee notification requirements and is in the process of expanding the scope of coverage under the rule.

Could you explain how you feel the OSHA standards have failed or not gone far enough?

Additionally, could you outline how your legislation addresses any concerns you might have with OSHA standards or enforcement?

A. The OSHA Hazard Communication Standard (HCS) does not go far enough in several key respects. It does not apply to public service employees, such as firefighters, hospital workers and sewage workers, in the 25 states that do not have state OSHA plans. It excludes all non-manufacturing areas (agriculture, transportation, construction, mining, etc.), many of which have high incidences of occupational disease. It fails to cover former employees. There are hundreds of thousands of American workers who are at risk from having been exposed to toxic substances on the job but who have retired, are disabled, have been laid off or simply have taken a new job. Given the long latency periods for most occupational diseases, these men and women also could benefit from notification and medical intervention.

In addition to OSHA's failure to extend coverage under the HCS for millions of deserving working men and women, I have serious reservations about OSHA's whole approach to enforcement in this area. For nearly four years, OSHA has vigorously resisted federal court orders to expand coverage under the HCS. Even with respect to the employers who are now covered, there are serious doubts about OSHA's willingness or competence to monitor and enforce what is essentially a self-enforcing standard. Early returns indicate that thousands of employers are failing to place appropriate labels on their products and failing to include the required information on material safety data sheets. Whether these violations are inadvertent or deliberate, OSHA lacks the manpower adequately to inspect and correct widespread noncompliance.

Finally, there is an important difference in fundamental approach between the HCS and S. 79. The HCS is a workplace warning standard: it educates workers to recognize hazards in the workplace, but does not include medical surveillance beyond the workplace. Unlike the HCS, S. 79 requires that employees who have been identified as being at risk be given information regarding what type of medical monitoring is appropriate for their exposure, and also requires that employers provide medical monitoring for these at risk employees. While a general program aimed at educating workers to recognize workplace hazards is clearly important, it cannot take the place of an individual notification program aimed at workers for whom medical surveillance will save lives.

QUESTIONS FROM SENATOR PRESSLER AND ANSWERS BY MR. MALLINO

1. In your testimony, you state that the bill is neutral on the question of liability, that is it neither adds to nor subtracts from any legal rights that presently exist.

   While this may be true per se, isn't there a potential danger that once employees have received notification of risk, they may assert that the employer knew of the risk prior to the mandated notification and sue on that basis? In other words, while it may be true that the bill is liability neutral on its face, might an indirect result not be still more liability suits?

1. The recent report of the GAO (May 1987), found no basis on which to assume any increased volume of litigation as a result of S. 79. This bill has no greater standing in litigation — and in some cases less — than any other source of information that already exists.

2. Are you concerned that the potential added cost to small businesses will result in lower wages or reduced benefits in those industries covered by the requirements of this legislation?

2. We believe that the overwhelming majority of small businesses would not even be affected by this bill since they neither expose their workers to toxic substances and even where they do, the exposures are not sufficient to have caused a "substantially significant" increased incidence of disease, which are the two basic requirements of S. 79 that would trigger notification. For that small minority of small businesses that might be covered under the bill, the only cost to the employer under S. 79 are those associated with the medical monitoring of current employees. (You should note that there is no obligation to pay for medical monitoring of former employees.) Moreover, and perhaps most important, these medical monitoring costs are not new costs, because covered employers are already required to provide medical monitoring under existing OSHA health standards. Therefore, since the costs are already being borne, we have difficulty believing that there will be new additional costs to the very small group of small businesses that might be affected by this bill.

3. Under the bill, employers are prohibited from discriminating against employees and applicants who have been notified of risk. My question concerns the applicants.

Are you concerned that employees might use other excuses during the interview process to ensure the person hired has not been found to be at risk?

Are we risking subjecting the very class of individuals this legislation is designed to help to potential discrimination at the application level?

3. We believe that the anti-dicrimination provisions of this bill are the best that can be developed consistent with the disease prevention purpose of the legislation. We would be glad to work with you and your staff to further refine this provision.

The CHAIRMAN. Thank you very much, Senator Metzenbaum. You made a very good statement.

Senator METZENBAUM. Thank you very much.

The CHAIRMAN. Our next witness is Frank Swain, Chief Counsel, Office of Advocacy, U.S. Small Business Administration. Mr. Swain.

Mr. Swain, if it is at all possible for you to summarize your statement, we will be most grateful.

STATEMENT OF HON. FRANK SWAIN, CHIEF COUNSEL, OFFICE OF ADVOCACY, U.S. SMALL BUSINESS ADMINISTRATION

Mr. SWAIN. I hope it is possible, Senator. Thank you. And thank you for holding these hearings.

I fully agree that a significant role for this Committee, albeit its lack of technical legislative jurisdiction, is to try to illustrate the major impacts that various legislative proposals have on small firms.

I will attempt to summarize our statement. First of all, I think that I should state clearly and forcefully that one should not conclude from small business opposition or apprehension about this particular legislation that small business employers are interested in occupational disease and hazard and would like to retain whatever situations exist now that may be hazardous.

Nothing could be further from the truth. Small businesses support effective programs to reduce illness and injury from hazardous chemicals.

The major point about the small business position in this particular legislation is that we believe that it is unnecessary, and we believe that it, although Senator Metzenbaum says that it is liability-neutral, in the technical sense that may be true, but it is anything but litigation-neutral, which I think is a far more practical consideration for most small firms.

Our first point is that this is going to be a major program affecting small businesses. Although Senator Metzenbaum rattled off the names of several very large companies that are in support of the legislation, we have statistics and statements in our testimony that relate the fact that those industries that NIOSH generally regards as potentially hazardous are highly populated by many, many small businesses. So this is going to be a major program that small businesses are going to have to be aware of.

Second, we do believe, and would disagree with Senator Metzenbaum, that the bill is not necessary; primarily because of OSHA's, not only past activities, but activities that they now have to continue, as a result of the recent court decision and as a result of the laws already on the books. I can get into that in detail if you prefer.

And third, we think that the bill would impose significant cost to employers, in general and small business employers in particular. Fourth, we think the bill as drafted is cumbersome and confusing, and has a lot of problems with it.

Maybe I can illustrate it, Senator, if you do not mind, by taking your example of the furniture manufacturer that applies lacquer.

What would happen under this bill is if, let us say we have a furniture manufacturer that is, among other things, painting or lacquering furniture and they have 25 employees.

At some point, if some study becomes evident that use of a certain sort of chemical might pose hazards later on down the line, a Federal board under the Health and Human Services Department, takes cognizance of that study, says, yes there is a risk, and makes a determination to notify employees that have used that risky chemical.

Now, one of the key problems in the bill, I think, is the way in which the Federal board determines which of all the potential risks out there they tend to focus on. And when a study is a good enough study for them to take notice of as opposed to having a lot of debate in the literature about it.

At any rate, let us say they take notice, and somehow they call up the employers. And that somehow is a little bit vague because they do not necessarily know who the employers are who are using this substance.

So in all likelihood what they are more likely to do is resort to public notice. And so let us say that they determine that furniture is made in a certain area of the country, so they put notices in the newspaper.

Be aware, if you worked with these sorts of chemicals, you better call your doctor, you better call your old employer, and find out what your rights are under this particular piece of legislation.

Now the employer on his own, as was accurately stated by Senator Metzenbaum, may or may not have notified the employee. This bill does not hit that issue. But if the employer does notify the employee, it seems to me that there is the potential for at least a difference in what the notice says between that and the Federal notice.

By the way, in the manufacturing industry, employers are currently required to notify employees under an existing, in-effect hazard communications rule at OSHA of what the potential safety and occupational disease harms are from chemicals that they are using.

The issue that the court decision relates to is that OSHA is now about to extend that rule from roughly half a million manufacturing establishments to another 4.5 million businesses who are not involved in manufacturing.

So that potentially, the hardware store, where people do not actually get the lacquer out and use it, but they simply sell it, would have a certain obligation to notify its employees that there are cans of lacquer there that might be potentially hazardous.

So right now, as we speak, OSHA is working on a significant extension of this hazard communication law, an extension required by the law and required by the May 29th Third Circuit Court of Appeals decision.

I am not here to defend OSHA. But I would simply say that OSHA is doing a lot. It may not be enough. It may not be fast enough from some people's perspectives. But this is a very active area of regulation right now.

Senator PRESSLER. Can I ask a quick question on that point, Mr. Chairman?

The **Chairman**. Yes.

Senator **Pressler**. My wife and I often browse in antique furniture stores. We cannot afford to buy anything, but we look. We see these small businesses painting, lacquering, and fixing up furniture.

Are paint and lacquer items in the hazardous category?

Mr. **Swain**. I certainly think that anything relating to paint or lacquers would be in almost any category. Senator Metzenbaum's definition roughly tracks with the current OSHA definition of what a hazardous substance is.

There are estimates that this may include up to some 575,000 substances. So, I would say almost any variation of paint or lacquer.

Senator **Pressler**. So that would mean that those small business employers would be obligated, under this bill, to write a letter to the previous employees and state that they were exposed to hazardous materials?

Mr. **Swain**. No, sir. That is a key point. Those small business employers under the current law are obligated to notify their employees, that there are potential hazards there through a warning sheet that is attached to any substance that is potentially hazardous.

And there is quite a complicated series of formulas about what you have to put on the warning.

Senator **Pressler**. When they hired them.

Mr. **Swain**. Yes.

Senator **Pressler**. But there is no obligation to notify the past employees.

Mr. **Swain**. That is right. Under Senator Metzenbaum's bill, Government would notify past employees. The employer would not notify past employees.

And one of the technical questions is, how does the Government know who the past employees are? Especially since it is up to 30 years in the past, according to some variations on the bill.

So at that point, what does that trigger in terms of costs for employers? Number one, for a current employee, the employer, if they are part of that affected group, must, if they are working with something hazardous according to the Government notice, must, upon request, transfer that employee to a job where they are not working with something hazardous.

And at the same time they cannot displace another worker. Or to put it simply, if they are painting lacquer, and the ruling is that that is hazardous, then they have to transfer them to the cash register.

What can they do to the person at the cash register? Well, suppose he or she does not want to go back and paint lacquer. You say, well, there is no job left for you. Sorry.

They cannot do that. They have to keep somebody on the payroll. There cannot be any job displacement. If the employer says, I cannot afford to do that, then they can let the employee go but they have to give them 12 months severance pay.

Now, the second major expense, aside from the expense of having to skew around employees, and obviously a large company can do this. They have got hundreds, thousands of employees, and there is a lot of opportunity there to alter the workforce.

For a small firm, and as Senator Metzenbaum said, there is not threshold. This applies to a two-person business as well as a 20,000-person business. It is practically not an option in many cases.

The second employer expense is monitoring, for both current employees and previous employees. The notice from the Federal board at HHS triggers a monitoring responsibility.

The employee goes to the employer and says, gee whiz, I got this letter, I saw this notice in the newspaper, so on and so forth. You now have to provide for my monitoring of potential medical problems.

Now what exactly that monitoring is, what sort of checkups, what sort of continued monitoring is appropriate, is a little bit vague. But what happens if the employer and employee have a disagreement? Any kind of disagreement.

Whether they are entitled to monitoring? Whether they are entitled to a job transfer? If the monitoring is good enough? Whether the substance is really the substance that is dangerous, and so on and so forth.

Well, then they go to the Department of Labor and they litigate it. They litigate it in an administrative setting. Now what does the Department of Labor know about what the Department of Health and Human Services had in mind?

Under the bill, that is a little bit vague. The Department of Labor adjudicates what the employee's rights are after a notice that is given by the Department of Health and Human Services.

So, one of the things that Senator Metzenbaum said was, it does not cost very much money, we are not talking about very many more Federal employees. Granting that, I am not sure that is true, but granting that, it is still going to create quite a chain of litigation that we do not have now under the current system.

Now, Senator Metzenbaum also says it is liability-neutral because if I the employer get one of these notices, I cannot have that introduced in court against me.

That is certainly the case, but I think your line of questioning involving the inter-relationship between the comp carrier, the health insurance carrier, and potential third party liability is key. And nobody really has answers to those questions.

When, let us say, the disease, whatever the disease is, is diagnosed, at that point the employee may want to try to go back after the employer. And of course, under State laws, the only way they can do that is through the comp system. Well, in many cases workers comp systems might have some barrier to that relief, or might have a cap on it.

So the employee's lawyer says, gee whiz, if we go back against the comp carrier we are not going to get very much money, or we are going to get involved in a mess because they had five comp carriers in 6 years and I just cannot litigate that all. So let us go directly against the manufacturer of the paint in a third party claim. Or, let us go against the health insurance carrier for refusing to send you to the doctor enough.

I did a little insurance defense work, and there is a well-known rivalry between comp carriers and liability carriers as far as who picks up certain employee claims. Senator Metzenbaum's bill is liability-neutral. But it is not litigation-neutral.

And it is going to result, I think, in a significant new number of claims. Not all claims are justifiable, but it is going to cost a lot of money to sort out those that are justifiable and those that are not.

So we think that the expenses for small business are going to be the relocation of employees, many times, which is not practical. Second, increased insurance costs, both health insurance and workers compensation insurance.

For anybody that is in the business of manufacturing anything that is potentially hazardous, probably increased liability insurance as well, because there is going to be an unknown, and surely increased number of claims resulting from all of these notices.

Because, remember, the notices are fairly general in nature. They are not specific. If somebody does a group of 40 employees, studies a group of 40 employees and says that every one of those 40 employees is likely to come down with liver cancer, the law does not require just notification of those 40 employees, but every employee in the country that is potentially in the same situation.

There is going to be a lot of time and effort and money spent unraveling who is really the target of this newfound scientific study.

In the end, Senator, we think this is a really terrible bill. We have a lot of specifics about this.

The CHAIRMAN. I would have never guessed that.

[Laughter.]

Mr. SWAIN. Let me summarize my statement and stop there.

[The prepared statement of Mr. Swain follows:]

U.S. SMALL BUSINESS ADMINISTRATION
WASHINGTON, D.C. 20416

OFFICE OF CHIEF COUNSEL FOR ADVOCACY

STATEMENT OF

HONORABLE FRANK S. SWAIN

CHIEF COUNSEL FOR ADVOCACY

U.S. SMALL BUSINESS ADMINISTRATION

BEFORE THE

COMMITTEE ON SMALL BUSINESS

OF THE

UNITED STATES SENATE

ON

HIGH RISK OCCUPATIONAL DISEASE NOTIFICATION

AND PREVENTION ACT OF 1987

June 10, 1987

- S. 79 duplicates programs already developed by the Secretary of Health and Human Services and the Secretary of Labor to notify, educate, and monitor workers against occupational health hazards.
- The costs of S. 79 would fall disproportionately on small businesses. Small businesses can expect increased production costs and insurance costs.
- S. 79 establishes a cumbersome judicial and administrative structure to implement and enforce the bill's notification requirements and the requirements for maintenance of earnings, security, and other rights and benefits.
- There are alternative initiatives that would provide similar protections but do not establish new government agencies or disproportionately affect small businesses.

Mr. Chairman:

Thank you for the opportunity to present my views on S. 79, the "High Risk Occupational Disease Notification and Prevention Act of 1987." Small businesses have an important stake in the outcome of Senate action in this area. The protection of workers is very important to small businesses. They are deeply committed to providing a safe workplace for their employees. Reducing worker illnesses and injuries would lower costs of insurance and worker's compensation contributions by small businesses. Productivity would increase due to fewer personnel absences. Thus, small businesses support effective programs to reduce illness and injury from hazardous chemicals. However, as a representative of small business interests before Congress, I do not support S.79.

The bill would affect numerous small businesses. A number of small business trade associations, through the Small Business Legislative Council, have expressed their concern about the costs of the S. 79. We have correlated the risk of chemical exposure from the Department of Health, Education, and Welfare's 1977 survey of occupational health hazards with the size of businesses obtained from our Small Business Data Base and the results can be found in the attached chart. The data reveal that many small businesses are involved in industries that have high exposures to occupational health hazards. For example, the risk of chemical exposure in the services industry is relatively high. Of the 857,000 service businesses, 747,000 have between 1 and 19 workers. Thus, the bill has significant potential to affect small businesses running the gamut from chemical manufacturers to the local service station.

The bill is unnecessary since it duplicates the existing hazard communication standard already enforced by the Secretary of Labor, and risk notification efforts undertaken by the National Institute of Occupational Safety and Health (NIOSH). The Occupational Safety and Health Administration (OSHA) is in the process of expanding the scope of coverage of the hazard communication standard to cover workers outside manufacturing exposed to hazardous chemicals. The expanded coverage would provide workers with essential information on the safe handling and use of hazardous chemicals. Although estimates vary, it is likely that the expanded hazardous communication standard will cover 4.5 million business establishments. The bill also would impose significant costs on employers that would fall disproportionately on small businesses. It would establish a cumbersome judicial and administrative structure to implement and enforce S. 79's notification and anti-discrimination provisions. Finally, there are alternative legislative initiatives that provide similar protections but do not establish new government agencies to notify and educate workers on the dangers of hazardous substances in the workplace.

I. Background

S. 79 recognizes the need to protect workers against occupational health hazards resulting from the use of chemical, physical, or biological agents in the workplace. The bill establishes a Risk Assessment Board (RAB) in the Department of Health and Human Services to identify worker populations that may be at risk because of their exposure to occupational health hazards. After identifying worker populations that have an increased risk of disease due to the exposure to occupational health hazards, the NIOSH, together with state and local governments, private organizations, and businesses would notify as many employees at risk of disease as the "appropriations and the best available scientific evidence permit." As part of the notice to the affected population, the RAB is required to assess whether and what types of medical monitoring should be made available to the identified population.

If medical monitoring is recommended by the RAB, the current employer must provide the monitoring at no cost to the employee if any of the exposure occurred in the course of the employee's employment by that employer. The monitoring requirements include those employees that have been notified individually and those the employer knows or has reason to know are members of a population at risk as identified by the RAB. Particularly significant with respect to the increased cost is the bill's prohibition of reductions in job benefits if employees should be moved to less hazardous or nonexposed jobs. Employees who have been exposed and moved to another position will maintain earnings, seniority, and other benefits as if the employee never left the former position. An employer may not layoff, terminate, or displace any other employee as a result of the proscription against benefit reduction.

Employee complaints about the lack of medical monitoring, employment discrimination, or the failure to protect benefits must be raised before the Department of Labor. An aggrieved employee can appeal the Department of Labor's decision to the Federal district courts. There the employee is permitted to prove, by a preponderance of the evidence, that the employee is a member of a population at risk and the employer should have provided appropriate monitoring.

II. S. 79 Imposes Disproportionate Costs on Small Businesses

Enactment of S. 79 would impose both direct and indirect costs on employer. The major direct costs of the program are for medical monitoring and benefit reduction protection. Indirect costs are increased insurance costs and lost productivity due to the removal of workers from occupational hazards. To be sure, these costs are incurred by all employers; but they fall disproportionately on small businesses.

The most significant cost for small businesses is the requirement to maintain an employee's earnings, seniority, and other employment rights and benefits if the employee has been "removed to a less hazardous or nonexposed job...." An employer's flexibility is further restricted because the bill prohibits employers from displacing, terminating or laying off any other employee in order to provide an alternative position. Moreover, the protection must last as long as there is an alternative position available. If no alternative position exists, the employer must continue to pay the nonworking employee for twelve months. Businesses will be required to remove experienced and productive employees and either place them in less productive positions or provide up to twelve months of fully paid medical leave or severance pay.

The benefit reduction protection will affect both large and small businesses. However, large businesses have more flexibility to transfer employees to less hazardous, and, possibly less productive, positions. In addition, large business may have sufficient flexibility to remove the employee and move another employee into the removed employee's position. Despite the costs incurred by providing the benefit reduction protection, large businesses may have sufficient scale to reduce the cost through the repositioning of employees in a plant or facility.

By contrast, small businesses have limited flexibility in repositioning their removed employees. In a small plant such as a machine shop, there may only be ten or twelve positions on the floor of the shop and three or four administrative positions. If the employer cannot terminate other employees, then there is no alternative but to create a new, not necessarily productive, position or grant the employee paid medical leave, or twelve months of severance pay. Moreover, the importance of a given employee rises as the total number of employees decreases. If an employee is removed, it is highly probable that the small business will have to hire a replacement. Given the reduction in flexibility inherent in S. 79, the small business may have to pay two persons to obtain the productivity of one.

Medical monitoring will be the second most significant direct cost. While the cost of any medical monitoring will vary with the type of business and its location, large businesses may be able to absorb the costs more easily. Larger businesses will often have a smaller percentage of their total employees identified at risk than smaller businesses in the same field. Thus, the costs of health insurance on a per capita basis may be less for large than for small companies even though a large employer may have a greater number of covered employees. In short, large businesses will be able to spread the increased cost of health insurance as a result of a monitoring requirement than smaller businesses.

In addition to the increased costs of insurance on a per capita basis, the identification process will lead to increases in health insurance premiums. The bill will lead to increased use of medical services by employees who are to be monitored. Employees who are not the subject of a monitoring requirement may become concerned and increase their use of medical services. Many small businesses then would be faced with the dilemma of purchasing health insurance they could not afford or absorbing the entire cost of the medical monitoring. Finally, the lack of affordable health insurance may prevent smaller businesses from competing with larger businesses for skilled employees and will further disadvantage these businesses.

Finally, the litigation consequences of the bill must be carefully considered by the Congress. While the its sponsors characterize the bill as "litigation neutral," it is anything but such. The bill will almost certainly generate substantial new litigation against many small businesses, much of which will be particularly burdensome for the small business community. At last year's White House Conference on Small Business, the 1,800 small business delegates overwhelmingly identified tort liability as their number one concern. There is good reason for this. For many small businesses, the specter of endless and costly litigation threatens their very viability.

At an absolute minimum, the Congress should consider the litigation consequences of this bill for the small business community, as well as its likely effect on the availability and affordability of liability insurance. I am firmly of the view that if the Congress conducts such a review, it will find the bill anything but "litigation neutral."

III. S. 79 Duplicates Existing Programs to Inform Workers of Occupational Health Hazards

In May of 1986, the Occupational and Safety Health

Administration's (OSHA) Hazard Communication Standard (HCS) became effective. The rule covers all hazardous chemicals, including health hazards, such as liver damage or cancer, and physical hazards, such as flammability and reactivity. A chemical is any element, chemical compound or mixture of elements or compounds or both. The definition of a health hazard in the HCS is similar to the one in S. 79. The HCS standard has been estimated to cover as many as 575,000 hazardous chemical products.

The HCS requires chemical manufacturers and importers to evaluate the hazards of each chemical they produce or sell. They must label each container of hazardous chemicals, and must prepare and distribute material safety data sheets (MSDS) which contain detailed information on the chemicals, including its hazards, and the means of protecting workers from those hazards. An MSDS must include the acute and chronic health effects of the chemical, as well as the signs and symptoms of exposure, and any medical conditions which may be aggravated by exposure.

The HCS requires all manufacturing employers to duplicate and implement a hazard communication program. Id. at § 1910.1200(e). All containers in the facility must be labeled, and employees must be given access to the MSDS's. Employees must be trained about the hazards, how to avoid them, and how to obtain and use the information made available under the HCS.

At present, the HCS covers 14 million workers in over 320,000 manufacturing facilities. OSHA is in the process of expanding the coverage of the rule to workers outside manufacturing exposed to hazardous chemicals. On May 29, the Third Circuit directed OSHA to proceed promptly to expand the rule.

In addition to the HCS program, OSHA has promulgated other rules requiring employers to maintain and provide current and former employees access to records of employee exposure to health hazards and medical records. For purposes of the record maintenance rule, an MSDS may be considered an exposure record under the rule. The exposure records, including MSDS's under appropriate circumstances, must be maintained for 30 years and medical records must be maintained for the duration of employment plus 30 years. The rule applies to all former and current employees where they have been or will be exposed to toxic substances or harmful physical agents. The record maintenance rule applies whenever any chemical substance, biological agent, or physical stress has yielded positive evidence of an acute or chronic health hazard in human, animal, or other biological testing conducted by, or known to, the employer. Thus, this rule would apply to any substance found to be an occupational health hazard under S. 79.

Third, OSHA has a substance-specific regulatory program which requires employee notification of hazards, both physical and chemical, to which the employees are exposed. OSHA enforces standards for 22 substances with specific rules for employee notification. OSHA also specifies the type and frequency of medical examinations or other tests which are appropriate for the substance being regulated.

The various programs developed by OSHA and NIOSH provide many of the communication activities prescribed by S. 79. The crux of S. 79 is to inform workers of the risks, ways to avoid those risks, and the precautions to take if exposed to those risks. OSHA's expansion of the scope of coverage of the HCS, along with substance-specific and employee access standards will provide workers with essential information on the safe use and handling of hazardous chemicals. In turn, this will reduce the incidence of work-related illness and death resulting from the use of hazardous substances.

OSHA's HCS program has only been in existence for one year. An expanded HCS program is expected in the near future. While the other programs have been in effect for more than a year, the full synergistic effects of those programs with the HCS program have not yet been realized. We do not need to create new Federal programs that duplicate the coverage of those already in place. Instead, Congress can review the effectiveness of programs already underway and then recommend corrective action if needed.

IV. The Administrative and Judicial Review Provisions of S. 79 Are Unwieldy and Should Be Revised

I am concerned about the administrative and judicial review structure of the bill. S. 79 provides for judicial review of RAB determinations and Labor Department rulings. The determinations of populations at risk are made after both notice and comment and the opportunity for a hearing. S. 79 does not specify whether the hearing should be held according to the provisions of §§ 556-57 of the Administrative Procedure Act (APA). Nor does the bill specify the type of record that a court should examine in reviewing Labor Department rulings. It provides that a court may set aside the determination of the RAB or the Labor Department if it finds that the either determination was arbitrary, capricious or an abuse of discretion. However, it also permits the court to set aside the determination if it is unsupported by substantial evidence on the record. Under the APA, a reviewing court is generally able to determine the applicable standard of review. If the administrative agency made a determination based on notice and comment rulemaking, then the reviewing court uses the "arbitrary, capricious or an abuse of discretion" standard. If the administrative decision was based on a hearing held pursuant to §§ 556-57 of the APA or some other statute, then the court uses the "unsupported by substantial evidence" standard.

S. 79 is less clear. In reviewing both the RAB determinations and the Labor Department rulings, the court must then determine whether the arbitrary and capricious standard or the substantial evidence standard applies. Clarification of which standard would apply in each situation is necessary.

V. Conclusion

S. 79 establishes a complex and confusing mechanism to provide for the notification and protection of workers against occupational health hazards. The bill creates a new government board which duplicates other programs designed to inform them of the risk involved in the use and misuse of hazardous chemicals. The program will affect small businesses disproportionately and reduce their competitive ability.

Congress should allow the OSHA programs to be fully implemented and given an opportunity to accomplish their mission before creating yet another regulatory overlay. Finally, there is an alternative approach which requires notification of employees who have personally been involved in NIOSH studies and expansion of the HCS program to all employees. This alternative notifies and informs workers of occupational health hazards without disproportionately affecting small businesses. I commend you, Mr. Chairman, for holding these hearings today. I will be happy to answer any questions you may have.

Number of Firms, by Firm Size,[1] Ranked According to Distribution of Potential Full Time Exposure to Occupational Health Hazards[2]

Industry Rankings	Number of Firms by Firm Employment Size				
	1-19	20-99	100-499	500+	Total
Manufacturing	257,736	73,783	17,503	4,251	353,273
Wholesale/Retail Trade	1,318,978	132,626	13,903	2,045	1,467,552
Services	747,381	83,542	21,412	4,775	857,110
Construction	469,786	36,037	4,089	423	510,335
Transportation/ Public Utilities	110,195	18,413	2,977	756	132,341
Agriculture/Forestry/ Fisheries	91,087	5,261	652	81	97,081
Oil & Gas Extraction	23,802	3,122	540	120	27,584

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[1] Source: U.S. Enterprise and Establishment Microdata (USEEM) file of the SBA Small Business Data Base, 1984.

[2] Source: Combined rankings of occupational health hazards adapted from U.S. Department of Health, Education and Welfare, National Occupational Hazard Survey, Volume III (Washington, D.C. 1977).

The CHAIRMAN. Well, Mr. Swain, you would agree with the thrust of the bill, would you not? That employees who have been endangered in the workplace have some rights. Do they not?

Mr. SWAIN. Absolutely.

The CHAIRMAN. How would you address the issue?

Mr. SWAIN. I think that the key way of addressing those rights is to allow the OSHA hazard communications rule to work, to be extended to all non-manufacturing businesses, that where there is potential workplace——

The CHAIRMAN. Why are you confining it to non-manufacturing?

Mr. SWAIN. Well, it has to be extended to all non-manufacturing as well. The antique shop is technically not a manufacturer. They buy the paint. They strip the furniture. They are not technically a manufacturer under some of the classic Government definitions.

And there are certainly cases where people work with hazardous substances outside of the manufacturing plant. In fact, a lot of it is in service businesses. So that should be extended.

If the Congress finds that OSHA is not doing its job well enough, there is plenty of legislative and legal authority on the books to strengthen what OSHA is doing, without creating this new scheme, which I think is fairly vague.

The CHAIRMAN. The administration has tried to cut OSHA every year since this administration has been here.

Mr. SWAIN. I cannot speak to what the OSHA budgets are, whether they are good, bad or indifferent, given the various perspectives.

But I think that what OSHA is doing——

The CHAIRMAN. They would have to have a substantial increase in funding to take on this responsibility. Would they not?

Mr. SWAIN. They have to take on this responsibility anyway. I am not sure what their budget is.

But granted, what you say is true. If OSHA has to have substantial increase in funding to take on this responsibility, then somebody else, some combination of OSHA and HHS is going to have to have substantial increase in funding to take on Senator Metzenbaum's responsibility.

The CHAIRMAN. Senator Kasten?

Senator KASTEN. Mr. Chairman, I have no questions.

The CHAIRMAN. Senator Pressler?

Senator PRESSLER. Let me ask about one angle here that occurs to me. Now, under the bill employers are prohibited from discriminating against employees and applicants who have been notified of risk.

My question concerns the applicants. Are you concerned that employees might use other excuses during the interview process to ensure the person hired, has not been found to be at risk.

Are we risking subjecting the very class of individuals this legislation is designed to help to potential discrimination at the application level?

Mr. SWAIN. I am not sure, Senator Pressler. I understand the concern that Senator Metzenbaum is trying to get to, and I think that that concern predates this particular piece of legislation.

Because if an employer suspects that an employee, after being hired, is going to file a claim for some sort of occupational disease, and the occupational disease may have predated the employment, that is a matter of very sticky proof as to which employer is responsible for which part of the occupational disease.

So I think that is a constant and a chronic problem that Senator Metzenbaum's bill cannot solve in and of itself. There certainly should be no discrimination against an employee that has previously had exposure to a chemical. But I think a lot of prudent employers are going to try to prefer to hire the healthiest person they can find.

Senator PRESSLER. All right. Let me ask one more question. I will put the rest in the record.

I want to return to my antique shop example. OSHA has promulgated employee notification requirements, as you have said.

Now, is that just in the manufacturing area? If you are painting and lacquering furniture, you are not really manufacturing it. But you might be just as exposed as someone who uses paint and lacquer in an actual manufacturing process.

Without this legislation, would OSHA cover the antique shop situation? If not, how are we going to take care of the problem if we do not pass this legislation?

Mr. SWAIN. The answer to your question, I believe, Senator, is that under current law and under regulations currently in effect, OSHA covers the furniture manufacturer. OSHA has regulations on the books that cover manufacturers. OSHA is under an obligation to extend that law to so-called non-manufacturers.

Senator PRESSLER. Now say that again?

Mr. SWAIN. They are under an obligation to extend that rule to non-manufacturers, which would cover potentially your antique shop situation.

I do not believe that the Department of Labor has officially responded to the Third Circuit order to promulgate this rule in 60 days. But I have reason to believe that within the next several weeks, they will come out with their plan on what they are going to do.

There might be a lot of tugging and pulling on the specifics of that. But I think that is going to be extended in the near future.

Senator PRESSLER. So you believe the current OSHA requirements are sufficient?

Mr. SWAIN. Yes, sir.

Senator PRESSLER. Thank you.

The CHAIRMAN. I think it is fair to say, Mr. Swain, that one of the real concerns of both big business and small business in this is that it foments litigation.

The mail I am getting is from employers who say, that if an employee gets a notice that he may have been exposed or he was exposed, whether he ever suffered ill effects from it or not, he is going to start the process of litigating.

I do not know how you avoid that. As I say, we have to balance safety in the workplace. We all are extremely dedicated to the survival of small business, the promotion of small business.

I do not know how you reconcile that. If you assume on the one hand that employees who are working or have worked in an unsafe environment, and if you agree that they are entitled to some relief or some compensation for having done so, I do not know how you can avoid some litigation.

Mr. SWAIN. That is why I think, Senator, the approach through OSHA is the preferable approach.

If the employee receives notification from the employer, and the OSHA rules are going to stipulate, do stipulate in manufacturing now, what that notification has to consist of, that there are certain aspects that have to be disclosed of the danger of various substances, then I think that there is an opportunity for direct and immediate communication as to what the problem or the potential problem is.

If at some point after the fact they either get a letter in the mail or see an ad in the newspaper that says, you may have a problem out there, they go to their employer and they say, I may have a problem. And the employer says, no, you did not work with that.

The employee immediately thinks, gee, this guy is taking me for a ride. He is not really being square with me. And I think an installation of the Government in the process is just from an employee-employer relationship standpoint, not the right way to go.

The CHAIRMAN. Mr. Swain. Thank you very much for your testimony and being with us this morning. Any Member of this Committee who chooses may submit questions to Mr. Swain in writing.

Mr. SWAIN. Thank you, Senator.

The CHAIRMAN. Thank you again.

Our next witness is David Mallino, director of legislation, industrial union department, AFL-CIO. David, welcome. We are anxious to have your testimony.

STATEMENT OF DAVID MALLINO, DIRECTOR OF LEGISLATION, INDUSTRIAL UNION DEPARTMENT, AFL-CIO, ACCOMPANIED BY PEG SEMINARIO, DIRECTOR, SAFETY AND HEALTH DEPARTMENT, AFL-CIO

Mr. MALLINO. Thank you, Mr. Chairman. With me today is Ms. Peg Seminario, who is the director of the AFL-CIO safety and health department, and an expert in this field.

I think rather than even reading the summary of my testimony, what I would like to do is have the full testimony included in the record.

The CHAIRMAN. That will be most welcome.

Mr. MALLINO. What I would like to do is address three issues that I think the discussion so far has raised, and maybe we can help clarify some of them.

The three issues that I would like to address is first the small business exemption that Senator Metzenbaum alluded to earlier in his testimony. Second, this whole question of litigation.

And third, I think Peg could shed some light on what the OSHA Hazard Communication Standard does and does not do. And I think we could do this in a fairly short period of time.

As my testimony indicates, we have been working with the business community and Senators involved in trying to come up with the best possible bill that we can. We think it is a good bill. We think we have done a good job.

We have found one area that is a problem. It recently came to our attention that there is a section of the bill, section 9(c) that at least technically, if applied to small businesses, could cause them severe economic difficulty, which was basically unintended when we wrote the bill. That section 9(c) has to do with medical removal section of the bill that the former witness alluded to.

We think it is a problem. We are prepared to work with, at least the labor movement is prepared to work with you and Senator Metzenbaum in crafting an exemption for small businesses, with 10 or fewer employees, from section 9(c), which is the medical removal section of this bill.

It is a problem. We recognize it is a problem. When the business community or other Senators or Members have come to us and pointed out problems, we have been more than willing to sit down and work out as much of the problem area as we could.

The second issue that I just want to briefly address is this whole question of liability. We believe, and I think everybody who reads the bill, now accepts the fact that this bill is liability-neutral.

It does not add to or subtract from any legal rights that currently exist independent of this bill. The latest claim in this controversy is that it will lead to a lot of litigation and you just had a little colloquy on that.

The minority, the Republicans in the House, asked GAO to conduct a study on this whole bill, which if you like I can submit to you for the record, to look at all of these questions.

Now this was done by the minority in the House, who are opposed to this bill. Frankly, we think it is a good study and we would recommend that everybody who is interested in this bill read it.

Because if nothing else, we think it adds at least some independent support for many of our positions in the bill. I would just like to quote one section of the bill, because they looked at this whole question of increased litigation.

And on page 13 of the report it says,

> Although there is a concern that risk notification may substantially increase the number of lawsuits, and workers' compensation claims by notifying workers, the bill does not change existing laws that permit workers to sue for damages or file for compensation.
>
> Even if the bill is not enacted, an increase in lawsuits and claims might occur because workers generally are becoming more aware of their rights to compensation for health problems caused by workplace exposure to hazardous substances.

This bill, as far as we are concerned, does not do anything outside of what can already happen. A worker can read about the exposure in Time magazine, for example, and have as much rights under workers' compensation or court cases as he would have under our bill.

The GAO looked at it, and they said, there is no evidence to suggest one way or another whether there will be the so-called explosion of litigation.

At this point I will stop and ask Ms. Seminario to kind of take you through the OSHA Hazard Communication Standard in terms of what it does, and especially what it does not do with respect to this piece of legislation.

[The prepared statement of Mr. Mallino follows:]

Statement of the Industrial Union Department, AFL-CIO

By David Mallino, Director of Legislation

To Examine the Effect on Small Businesses of Legislation Requiring Government Notification of Workers Determined to be at Risk of Occupationally Related Diseases

Before the Committee on Small Business

United States Senate

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About IUD

The Industrial Union Department is the largest of the AFL-CIO's constitutional departments, with 55 affiliated unions representing 5 million members.

As a constitutional department, IUD is a semi-autonomous branch of the AFL-CIO. The department is financed directly by per capita payments from its affiliates. It is directed by a president and a secretary-treasurer who are elected at biennial conventions. The governing body is an executive council composed of the two officers and 24 members, who are principal officers of affiliated unions.

History

The IUD stems from the 1955 merger agreement between the AFL and the CIO which provided for a new industrial union department within the merged federation. Walter Reuther, then CIO and UAW president, was elected its first president.

Reuther was succeeded in 1968 by I.W. Abel, president of the United Steelworkers of America, who served until 1977. Jacob Clayman succeeded Abel for one term, until 1979, when Howard D. Samuel was elected president and Elmer Chatak, secretary-treasurer. Clayman had served as IUD secretary-treasurer from 1975 to 1977. James Carey, former IUE president and CIO secretary-treasurer, was the department's first secretary-treasurer, in office from 1955 to 1965.

Function

From its inception, the function of IUD has been to provide support services to affiliated unions in those areas where they share common concerns and where special efforts are needed to supplement the work of individual unions and the AFL-CIO.

IUD has a tradition of working with coalitions to strengthen labor's position on key issues. The department helped create the OSHA/Environmental Network, the Full Employment Action Council, the Consumer Federation of America and a number of others.

Programs

Organizing — More than one-third of IUD's resources are devoted to organizing. The department initiated the concept of cooperative organizing under then President Reuther in 1963 and has provided major support for many organizing campaigns since then. Under this approach unions assign their organizers to work under the direction of an IUD coordinator. The method encourages cooperation among affiliates through the pooling of available resources and virtually eliminates jurisdictional disputes. The organizing section is located in Atlanta, Ga., with field offices in the Mid-South and Southeast.

Coordinated Bargaining — Another hallmark of IUD is coordinated bargaining which brings together different unions having contracts with the same company to give them stronger leverage at the bargaining table. More than 40 unions participate in 71 different company committees involving about 2,200 bargaining units and three-quarters of a million workers.

Safety, Health & Environment — Ever since it played a leading role in passage of the 1970 Occupational Safety and Health Act, IUD has taken the initiative in the courts and in legislative battles to assure proper implementation of the law. Through its work with the OSHA/Environmental Network, the department also has helped defend environmental protections.

Economic Policy — IUD has responded to downturns in the economy by examining and calling attention to the long-term problems faced by America's industrial sector. The department is a prime mover in efforts to develop a national industrial policy for the U.S. that will revitalize the industrial sector.

International Trade — This area has been an important concern to IUD because of the enormous impact that the policies of foreign governments have on U.S. industries and industrial union members. IUD continues to develop analyses, educational efforts and legislative approaches to key areas of trade policy, often through coalition activities.

Pensions — IUD monitors regulatory and legislative activities that could affect the status of benefit plans negotiated by its affiliates. The investment policies of private pension plans are an area of special concern for the department, which publishes *Labor & Investments*, the principal publication in this field.

Howard D. Samuel President

Howard D. Samuel's career in the labor movement has spanned more than 30 years and culminated in his election as president of the IUD in September 1979. For most of the period 1949-77, he was associated with the Amalgamated Clothing Workers of America, first as an organizer, then assistant president and from 1966 as an international vice president. He directed the union's political and legislative activities and as head of its union label department coordinated the union's boycott campaigns.

From January 1977 until his election as IUD president, Samuel was deputy under secretary of labor directing the U.S. Labor Department's International Labor Affairs Bureau.

Samuel has been active in politics, serving as a delegate to state and national Democratic conventions, and has served on several government commissions and on the boards of numerous community organizations. A graduate of Dartmouth College, he also co-authored two books on government.

Elmer Chatak Secretary-Treasurer

Elected IUD secretary-treasurer in September 1979, Elmer Chatak is responsible for administering the financial affairs of the department as well as providing direction to its organizing and coordinated bargaining activities. Since 1951, he has been involved in union organizing campaigns, first on the CIO staff for five years, then with the United Steelworkers.

The USWA loaned Chatak to IUD in 1963 to serve as organizing coordinator for the Mid-Atlantic cooperative organizing campaign, directing a staff of 35 organizers from 20 unions. His win record of 153 of 197 campaigns covered 31,500 new members.

In 1968, Chatak returned to USWA to establish an organizing department and serve as the first director, a post he held until being elected IUD secretary-treasurer. During that period, about 3,000 bargaining units with over 250,000 workers were organized into the union.

Chatak was born on December 15, 1929, in Acmetonia, Pennsylvania.

Mr. Chairman, members of the Committee, my name is David Mallino and I am the Legislative Director of the Industrial Union Department (AFL-CIO). The High Risk Occupational Disease Notification and Prevention Act is a bill to establish an annual $25 million federal program to identify, notify and counsel workers at high risk of occupational disease because of previous exposures to workplace toxic substances.

The purpose of the legislation is to provide high risk workers, who presently are unaware of their risk, with the medical information that they and their family doctors need to prevent the onset of occupational cancers and other diseases or to diagnose the disease early enough so as to successfully treat it. The legislation is a cost-effective, self-protection and prevention program that will save both lives and money.

The legislation, as reported by the Senate Labor Subcommittee, is a carefully worked out compromise developed by its sponsors, Senators Howard Metzenbaum, Robert Stafford, and David Durenberger, along with a unique coalition of business, labor, public health, public interest and environmental groups.

While some parts of the business community continue to oppose the legislation, many of their arguments are without foundation. For example:

— The legislation does not create a large new bureaucracy, but rather merely a 7-member Risk Assessment Board, in the Department of Health and Human Services.

-- Since the entire program is capped at a $25 million annual authorization, there is not a large expenditure of federal funds, especially when compared to the annual federal cost of occupational disease estimated to be some $3.3 billion from the Social Security Disability, Medicare and Medicaid programs.

- Moreover, the program does not impose any new burdens on business other than what is already required under the Occupational Safety and Health Act of 1970 and its various health standards.

- Finally, there are no new liability burdens placed on business beyond what already exists under current law. The bill is absolutely neutral on the questions of liability. It neither adds to nor substracts from any legal rights that presently exist.

The Compromise Bill

Through a series of negotiations among the bills' sponsors, and the business, labor and public health communities, a number of major changes have been made in the original bill. The changes fall into three basic categories — scientific and medical determinations, procedural protections, and liability neutrality.

Scientific and Medical Determinations. The following changes were made to accommodate the current state of accepted scientific and medical practice:

1. The definition of "Occupational Health Hazard" was redefined to more clearly reflect current administrative law.

2. A "population at risk" was redefined to mean a population which exhibits a "statistically significant" increased incidence of disease compared to a non-exposed population.

3. The scientific considerations, determinations and designations of the Risk Assessment Board were more clearly spelled out so that only those worker populations who are truely at risk will be subject to notification.

4. The contents of the notice to be sent to workers were redefined to better reflect sound medical practice.

5. The National Institute for Occupational Safety and Health (NIOSH) was designated as the agency to conduct the actual worker notifications.

6. The Risk Assessment Board was restructured to include both government and non-government occupational health professionals appointed from a list to be compiled by the National Academy of Sciences.

Procedural Protections. To insure that the views and interests of all parties to the process will be fully heard and considered, the following changes were made:

1. The notice and comment procedure, prior to a Board determination of populations at risk, was expanded to include public hearings if requested by an interested party.

2. The judicial review of procedures were expanded to include the full range of judicial review criteria as spelled out in the Administrative Procedures Act.

3. The worker anti-discrimination and medical removal procedures were streamlined and further tightened so as to not violate either existing law, administrative standards, or labor-management contracts.

Liability Neutrality. The original bill adopted the principle that the program should be neutral on the question of liability; that it should neither add to nor subtract from any legal rights currently existing under either workers compensation or tort law.

Accordingly, the original bill flatly prohibited the use of any notice that a worker might receive under the bill from being used either in workers compensation or tort claims. As is the case today, any information or studies on which the notice was based or any information flowing from medical surveillance programs could be used in any subsequent claim since that information already exists independent of the legislation.

The compromise bill further "walls off" liability by prohibiting the use of Board determinations and designations in any workers compensation or tort claims.

Moreover, both the federal government, any state or local government or any employer who voluntarily opts to notify its own workers are held harmless for the failure to notify any employee, unless the failure was willful.

Compromise Supporters

From the very beginning, work on this bill has been a bipartisan effort. Senators Metzenbaum and Stafford, introduced the original measure, and they were joined in the compromise bill by Senator Durenberger. It should be noted that on all the issues that were the subject of compromise, the House and Senate bills are nearly identical. Currently, the bill enjoys 142 cosponsors in the House and 31 cosponsors in the Senate.

Business Support. A number of business groups and companies came forward in a good effort to make this bill a sound and workable proposal. For the most part, all of their major concerns were accommodated in the compromise bill. Those business groups currently supporting the compromise include the Chemical Manufacturers Association and 20 of its member companies, including a number of smaller chemical firms.

The bill is also supported by the American Electronics Association which includes many small electronics companies, along with Digital Equipment Co., General Electric, and IBM. Finally, the Crum & Forester Insurance Companies are actively supporting the legislation.

Labor Support. The labor movement has long supported the idea of disease prevention, especially in the workplace where the problem is most acute. It has recognized that disease prevention and health promotion not only saves lives and avoids the human tragedy involved, but also is the best way to reduce the enormous economic costs involved in lost wages, productivity, and health care. Thus, labor support for the compromise bill encompasses the entire labor movement, including the AFL-CIO, all of its constitutional departments, all of its affiliates plus the non-affiliated International Brotherhood of Teamsters and the United Mine Workers.

Public Health, Public Interest & Environmental Support. The public health, public interest and environmental communities have been active participants in furthering occupational health for some time and were very early supporters of H.R. 162/S. 79. The compromise versions of the bill continues to enjoy the active support of all groups, including: American Cancer Society, American Lung Association, American Association of Occupational Health Nurses, American Public Health Association and at least 10 other public health and environmental organizations.

Individual Support from the Scientific and Medical Communities. In addition to the various organizations and groups supporting the bill, a number of distinguished individuals from the scientific and medical community have come forward to support the legislation. Preeminent among them is Dr. Irving J. Selikoff, Professor Emeritus, Mt. Sinai School of Medicine, one of the world's leading authorities on occupational and environmental health. Dr. Selikoff has been joined by a number of distinguished occupational health professionals, including two former assistant secretaries of Labor (OSHA), three former directors of NIOSH, a former director of the National Cancer Institute, and a number of other medical and scientific experts.

The medical and technical aspects of the bill have even been publicly endorsed by occupational health policy professionals in the Reagan Administration, which, as you know, opposes the legislation.

Mr. Chairman, we believe that this is a good bill, it is a sound bill, it is a workable bill and in the long-term will save lives and money as well.

In developing this compromise, we have tried to address and resolve all the legitimate problems that have been raised by the business community on various aspects of the legislation. We think we have done a good job. However, very recently we have discovered an additional problem which directly effects small businesses concerning the medical removal provisions of the bill. As currently drafted, Section 9(c) may have the unintended effect of forcing certain very small businesses into serious economic difficulty and therefore we are proposing to Senator Metzenbaum that he entertain an amendment to exempt small businesses with 10 or fewer workers from the medical removal provisions of the bill. We are prepared to work with the committee and Senators Metzenbaum and Stafford in drafting such an exemption.

Thank you.

The CHAIRMAN. Fine.

Ms. SEMINARIO. Thank you. I will just take a few minutes of time here.

The OSHA Hazard Communication Standard was issued in 1983, essentially to put requirements on the chemical manufacturing industry to evaluate the hazards of chemicals it produces.

And if in fact they are hazardous they have to provide labels and data sheets on chemical properties and hazards that they then ship along with the products, so that downstream users are apprised of the hazards.

Employers in the manufacturing sector then have the responsibilities to have those data sheets on hand, make sure containers of chemicals that are hazardous are labeled, and to provide training, one-time training to employees who are potentially exposed.

The protections are currently limited to the manufacturing sector only. As has been stated here before, OSHA has been ordered by the Third Circuit Court of Appeals to expand the scope.

The reason they have been ordered to do so is that we challenged OSHA's limitation on the standard back when it was issued in 1983. And in 1985 the Third Circuit ordered OSHA to expand the scope of the standard to cover all workers.

And OSHA did not do so. So this past January the labor movement, not OSHA, went back to court and we asked the court to hold the Secretary in contempt for failure to act, and to order OSHA to immediately expand the scope of the standard.

A week and a half ago the court acted, and they again ordered OSHA within 60 days to expand the scope of the standard to cover all workers and all industries, unless the agency can show by an industry-by-industry sector it was not feasible to do so.

And so again, OSHA has been failing to act. We have been prodding and pushing them, litigating them, and they still have not indicated what their response will be. The latest thing they did was to file papers asking for more time, which has been the major problem, that they have been failing to act in a timely fashion.

The OSHA Hazard Communication Standard is really directed toward dealing with current exposure to chemical hazard and a reduction of those exposures. It covers currently exposed workers.

It in no way, shape or form covers any worker who was formerly exposed to a toxic substance. It also would not cover a worker, for example, who was exposed today and then moved on to another job, perhaps a cleaner, safer job, 5 years from now.

That standard would not cover them. It deals with only currently exposed workers who are currently employed by the employer who exposes them.

The high risk bill really has a very different focus. It is dealing with workers who have already been exposed. It deals exclusively with chronic health hazards, those that take a long time to develop.

And so the population of workers we are dealing with in the high risk bill, the majority of people are really those who have been exposed in the past. Many of those workers are no longer employed by the employer who exposed them.

And they are no longer exposed to that toxic substance. So they are not, by the definition of the Hazard Communication Standard, subject to the Hazard Communication Standard.

It also has a very different purpose. The high risk bill is to give people information about their individual risk of disease, and along with that information provide them guidance about the kind of medical surveillance they should be seeking.

If you look at the OSHA Hazard Communication Standard, labels, data sheets and training programs, there is nothing required nor is there anything in the information provided by chemical manufacturers' employers that deals with the issue of medical surveillance.

You just will not find it. Again, it is not required to be on any of the kind of information. So, any of the workers who are currently exposed and covered by the Hazard Communication Standard, they are not being provided any guidance with respect to the kind of medical surveillance they should be seeking, nor are there any provisions for medical surveillance to take place.

So again, the standard has a different coverage, with the kinds of people who will be covered, and it has a different focus with the kind of information that is provided to those workers.

The CHAIRMAN. Thank you very much. One quick question, David. I appreciate your willingness to work with us in changing this bill to exempt some small businesses from a portion of it.

Your point is that the only change this law makes is in notification. In other words, when it comes to liability, the liability of the employer or the carrier, nothing is changed.

Mr. MALLINO. Senator, that liability, whatever it is, exists today. If this bill does not become law, that liability is going to be there today. If this bill becomes law, what this bill does not do is it does not change any liability that anybody has today or after it becomes law.

This bill is absolutely neutral in terms of neither adding to nor subtracting from any of the current rights or liabilities that anyone has.

And we have invited this administration, we have invited every lawyer in town from all of the insurance companies, if they wanted, to sit down. And if they could find something wrong, that violated the neutrality principle, we would change it.

We made that offer in public. We made that offer in private. What they want to do is that they want to try to fight out this whole question of tort law on this bill. And we have said, that is off-limits.

There are problems with the tort system. We recognize that. But we are not prepared to engage in trying to reform the court system on this bill.

The CHAIRMAN. Thank you, David. Senator Levin.

STATEMENT OF HON. CARL LEVIN, A U.S. SENATOR FROM THE STATE OF MICHIGAN

Senator LEVIN. Mr. Chairman, I understand that OSHA has carried out some pilot projects. Are you familiar with those projects?

Can you tell us what your reaction is to them, both as to the notification issue and as to the previous employees issue?

Ms. SEMINARIO. I am familiar with them in a limited extent. I will not claim to be an expert with respect to each of the individual projects.

The projects were actually not carried out by OSHA. They were carried out under the auspices of the National Cancer Institute and NIOSH, the National Institute for Occupational Safety and Health.

And I think there have been three pilot projects that have been conducted to date. One was in Augusta, GA. One was in Port Allegheny, PA, a group of asbestos-exposed workers.

And the other was a group of pattern makers in the automobile industry who make the models of cars, where there was found to be an increased risk with respect to colon cancer.

And each of those cases, the point of the project was to identify the workers who had been exposed, and again a large number of those workers were formerly employed, formerly exposed workers.

Because the latency periods for the diseases that were being looked at, the time from last exposure to the time of the disease being manifested was quite significant and quite long.

An attempt was made to go in and using community-based medical care, to set up a system first of notifying those individuals, providing medical screening.

But also a followup with respect to medical care for those individuals, both for ongoing screening as well as intervention for those individuals who were found to be, not only at risk of disease, but having developed either early signs of disease or actual cases of cancer.

Mr. MALLINO. Now, you will hear two things about those pilot projects. The first pilot project in Augusta, GA, where they found and ultimately there occurred a significant number of bladder cancers, those people filed suit.

I think the total scope of the suit was about $500 million. None of those suits were successful because of the complications in the Georgia workers' compensation or tort laws.

They were all thrown out by the Georgia Supreme Court. Now, many of them probably were very legitimate suits that should have been processed, except for the law. But you will hear the charge that one notification program resulted in something like $300 million to $500 million in claims, none of which were successful.

What you will not be told is that in the automobile pattern makers experiment, which was, what, 5,000 workers?

Ms. SEMINARIO. About that.

Mr. MALLINO. Five thousand workers, not a single claim was filed. Not a single court claim was filed under that notification and screening project.

Senator LEVIN. Mr. Chairman, I do not see that we are going to hear from the National Institute for Occupational Safety and Health this morning.

I am wondering if you might ask them if they could summarize those pilot projects for the record.

The CHAIRMAN. I would be happy to.

Senator **Levin**. Because I think NIOSH has experimented along the lines of this bill already, as I understand it, at least in terms of notification and at least in terms of including previous employees.

And we should get that experience written up in a way that we can use in our considerations.

Mr. **Mallino**. There is some of that in this NIOSH report.

The **Chairman**. I am anxious to read that report. Thank you both for being with us this morning. Your testimony has been excellent.

[Material follows:]

Commentary

Notification of Workers at High Risk: An Emerging Public Health Problem

PAUL A. SCHULTE, PHD, AND KNUT RINGEN, DRPH

Abstract: During the last two decades, an increasing number of epidemiologic studies have found cohorts of workers to be at high risk of work-related chronic diseases, especially cancers. These studies frequently have led to the broad recognition of occupational hazards and eventually to the prevention of exposures to such hazards. Generally, however, the individual cohort members found to be at high risk have not been notified of study results, and programs of medical intervention or of palliative services directed at these individual workers have not been developed. Recently, the issue of whether or not workers have a right to be notified more directly about known health hazards to which they may have been exposed has emerged as a major, unresolved question in public health policy. Issues of concern include the criteria that should guide notifications; whom, when, and how to notify; and who should pay for notification and follow-up services. This commentary discusses the scientific, ethical, economic, and institutional aspects of worker notification, and describes three new demonstration projects that have provided notification and intervention for workers at high risk of bladder, colon, and lung cancer. (*Am J Public Health* 1984; 74:485–491.)

Introduction

Epidemiologic investigations conducted during the past several decades have identified numerous cohorts of industrial workers as being at high risk of work-related diseases, especially occupational cancers.[1,2] Most of these studies have employed the historical (restrospective) cohort methodology, and have therefore been based on the linking of personnel, tax, and social security records with records of mortality. Because such studies have involved no direct contact with subjects and there were no procedural risks, they have traditionally required no informed consent.[3]

As a matter of policy, the results of epidemiologic studies on occupational cohorts have been made available to employers, employee representatives, and the scientific community. There has, however, been no statutory requirement or systematic attempt by researchers to provide results to study subjects, and, in general, this has not been done.

In the past decade, a major controversy has arisen in the media and the courts over the question of the rights of individual study participants and of the public to be notified about epidemiologic study results.[4] This controversy has developed against a background of change in public philosophy in the United States. Common law doctrines of caveat emptor in the sales contract and of acceptance of risk (volenti non fit injuria) in the employment contract have been altered significantly by a broad range of statutes enacted to protect workers and consumers.[5] Among the policy changes of importance to worker notification are:

- *The recognition that the right to self-determination is a fundamental democratic principle.*[6-8] In this view, individuals are considered to be best able to protect their lives and interests if they are informed about a known risk.
- *The public acceptance of the right to informed consent by patients and research subjects.*[9] The Nuremberg Code and the Helsinki Convention affirm and reaffirm the right of individuals to be given full disclosure about potential risks and benefits of experimental biomedical procedures. These principles might be extendable to cases where health authorities are in command of information on health risks to identifiable population groups.[10]
- *The passage of the Occupational Safety and Health Act of 1970 and of the Mine Safety and Health Act of 1977.* These Acts established in law the principle that workers have the right to be protected from workplace hazards. Subsequently, attempts have been made to extend this principle so that workers can be provided full knowledge of potential hazards and their consequences.[11]
- *The passage of other federal statutes, such as the Freedom of Information Act and the Toxic Substances Control Act.* These Acts are indicative of a climate where disclosure of information to affected parties and to the public is considered a general objective.[12]
- *The passage of the Health Services Research, Health Statistics and Health Care Technology Act of 1978 (PL 95-62).* This Act indicates a Congressional desire to promote notification and intervention programs for individuals found to be at high risk.[13]
- *The broad acceptance of many public health principles.* Provision of early detection and treatment for high-risk groups and education to reduce exposure to interacting risk factors have gained widespread support in the health community.[14,15] However, this support has been tempered by critical analysis of the scientific and clinical merit of interventions directed at asymptomatic populations.[16]

Address reprint requests to Paul A. Schulte, PhD, Epidemiologist, Hazard Evaluations and Technical Assistance Branch, Division of Surveillance, Hazard Evaluations and Field Studies, National Institute for Occupational Safety and Health, Robert A. Taft Laboratories, 4676 Columbia Parkway, Cincinnati, OH 45226. Dr. Ringen, formerly Director of Health Policy and Medical Programs, Workers' Institute for Safety and Health, Washington, DC, is currently affiliated with the National Cancer Institute, Division of Resources, Center and Community Activities, Bethesda, MD. This paper, submitted to the Journal June 24, 1983, was revised and accepted for publication September 22, 1983.

TABLE 1—Examples of Notifications for Health or Safety Risks

Description	Action	Basis
Recall notification		
Consumer products regulated by the FDA	Notify retailer and in some cases consumer-product recall	21CFR, Part 7
Automobile recalls	Notify retailer and consumer and repair defect	15 U.S.C., 1411
Biomedical research	Informed consent	National Research Act of 1974
Patient Package Inserts	Written information	FDA requirement
Notifications of health risks due to accidents, inadvertent procedures, or medical screening:		
Firemaster Incident-Polybrominated biphenyl exposure	Public notification, animal quarantine and destruction	State authority (Michigan)
Thyroid cancer risk due to irradiation of thymus or scalp	Personal notification and screening	Institutional concern
Genetic screening	Personal notification	Sought by potential parents
Diethylstilbesterol use	Public notification	Surgeon General
Notification of the toxicity of new chemicals	Pre-market notification of purchaser	Toxic Substances Control Act
Cigarettes	Warning label on product	Surgeon General

The Public Health Tradition in Notification

The history of public health does not provide a consistent guideline with regard to notification of disease risk. In part, this may be attributed to the fact that notification and isolation of the person at risk is an individual-oriented intervention component of the overall framework of public health. During 18th century merchantilism, the thrust of health policy was the establishment of quarantines to control infectuous disease, which initiated a fairly routine use of notifications.[17] However, due in part to the opposition of special interests, such measures played a less significant role in the wide range of sanitary reforms in the 19th century public health movement.[18] And while most of today's communicable disease legislation requires reporting of infectious disease cases and notification of risks where known—such as for food or drug contamination[19]—hospital law in the US has held that there is no affirmative duty to warn prospective patients of the presence of infectious or contagious diseases within the hospital. This principle of law is based on the hospital's duty to isolate infectious patients and the assumption that patients are aware of such risks when they enter the hospital.[20]

The current concern about notification for chronic disease risks is more complicated than the case of infectious disease risks because of the complex etiologies and long latency periods involved, particularly for cancers. Exposure to a carcinogen (or other chronic disease precursor) may occur decades before the onset of the disease. Notification of exposed persons of their increased risk can occur at various times on the continuum between exposure and onset of the disease, often with the majority of a cohort being asymptomatic upon notification.

Examples of different types of notifications for health and safety risks are shown in Table 1. Much of the history of notification has concerned warnings for defective and hazardous consumer products.

Previous Notification Efforts

The history of notification of chronic disease risks, in general, and of workers, in particular, is sparse. An early milestone came when the Surgeon General, in 1964, notified cigarette smokers of their risk of cancer and heart disease by means of a national report and, subsequently, a package labeling requirement.[21] Since then the public has been informed of other acquired risks, such as bladder cancer from saccharin,[22] but specific groups or individuals have usually not been informed directly.

One of the earliest attempts at individual notification occurred in 1959 when an effort was made to locate, notify, and examine patients treated in a particular hospital for thyroid abnormalities indicative of cancer related to irradiation.[23] Eventually, other hospitals began notification programs.[24] Upon identification by the appropriate hospital, the former patients were notified by letter, provided with a photocopy of their original treatment records, and advised to consult their physician or utilize screening clinics set up for them.

Prior to the 1970s, it was not general practice to disseminate risk information to workers,[25] and state-initiated occupational disease measures were blocked or delayed during most of this century.[26] The United Mine Workers of America initiated the first comprehensive program for notification of workers about a disease risk, coal workers' pneumoconiosis (black lung). The UMWA also developed the first support programs with the formation of a Welfare Fund for pneumoconiosis victims. In 1969, this program was adopted by the federal government under Title IV of the Federal Coal Mine Safety and Health Act.[27]

More recently, a number of efforts to notify high-risk workers have been made by government, unions, and industry:

- In the mid-1970s, federal agencies sponsored pilot programs of notification and intervention for individual asbestos-exposed workers in Tyler, Texas[28] and

San Francisco, California[29] and for vinyl chloride workers in Louisville, Kentucky.[30] These programs failed to provide continuity when the federal funding was exhausted, because the organizers had been unable to build the local community base required to sustain them.[31]

- In 1978, the federal government also sponsored a general occupational health alert for asbestos.[32] This was a mass public notification program relying on media, letters to physicians, and notices accompanying social security checks. This program probably increased the general awareness about environmental health hazards. However, with the exception of a medical surveillance program established by the US Navy for its personnel, this federal initiative does not appear to have resulted in the development of targeted intervention programs for high-risk groups exposed to asbestos.
- A notable union-sponsored program has been developed by the International Association of Heat and Frost Insulators and Asbestos Workers, AFL-CIO.[33] It consists of education and information about preventing occupational exposures and smoking cessation, as well as special medical tests, mainly for lung diseases. This program tends to vary from district to district, and is by no means a comprehensive, standardized, or continuous response to this problem. It has been more oriented to providing general information to the broad membership of the union than to provide personal notification.
- Several industries have initiated programs for workers who are known to be or potentially at risk of brain cancer (petrochemical),[34] lung cancer (bis-chloromethylether), and bladder cancer (aromatic amines).[35]

Samuels has reviewed these programs, and has drawn the following conclusion concerning their effectiveness:

> Past programs in notification and intervention have been subject to four major deficiencies:
>
> - Failure to use existing networks of communication, particularly those of the appropriate labor organizations;
> - Re-enforcement of attitudes and activities that perpetuate dependence on others to make vital, personal decisions in health maintenance;
> - Ignorance of the long-established fact that where behavioral control is justified, it will occur most effectively through peer groups removed from the hostility of the workplace and with family involvement and community support;
> - Failure to enhance the ability of the worker and his family to manage the legal, financial, and psychological problems of lifelong surveillance, intervention, and treatment, and premature death.[31]

The Notification Process—A Proposed Model

Worker notification consists of three major stages: 1) ascertainment of notifiable populations and individuals at risk; 2) the actual process of notification; and 3) post-notification support and intervention. These stages need not be the responsibility of a single agency or institution, but all three should be addressed if notification is to be comprehensive and effective.

From the demonstration projects conducted to date (see next section), the following criteria appear to be central to the development of successful notification programs:

- *A sound scientific data base* (e.g., acceptable methodology and risk assessment) *and clinical management plan*—These are prerequisites to the development of program credibility among workers, employers, and the community-at-large.
- *A strong organizational base in the community*—This is essential in order to provide outreach to and tracking of participants, as well as educational, counseling, and referral services. For organized workers, the union forms the organizational nucleus; for non-union workers, the nucleus can be developed within the existing social networks and community structure of the workers.
- *Linkage of medical services and the community base*—Recognition of the interdependence and equal importance of medical services and community support is critical to the institutionalization of self-sufficient and successful programs.
- *Recognition that a worker notification program is a health education program for the entire community*—Various groups in the community will have different concerns and need different types of information.

Ascertainment of Risk

Criteria for establishing whether a cohort is "at notifiable risk" remain elusive. Failure to establish such criteria can lead to groups being falsely notified or not notified at all. In some cases, decisions about whether to notify become especially difficult, as when epidemiologic studies determine that a particular occupation has an elevated disease risk, but where the cause of the elevation is not known. This was the case with regard to brain cancer among petrochemical workers.[34,36]

Determining exposure depends on specific data about a cohort of workers at a specific plant. Sometimes it is possible to reconstruct exposure levels from industrial hygiene records maintained by companies and inspection agencies. Often, dose-response data from past studies of workers who have been similarly exposed make it possible to anticipate the number of disease cases (numerator) and the time when they will become manifest clinically (latency).

The further in the past the exposure, the less likely the exposure information is to be accurate. Often, it is necessary to rely on observations or even historical anecdotes. Even when information is minimal, it still may be possible to differentiate a work force on the basis of high and low risk, and to notify accordingly. However, in such cases, it is likely that the notification will include individuals who have been misclassified in one form or another. Because of the uncertainty of available data, the construction of the cohort should be conservative in order to include all possible members at the appropriate risk levels, and the notification message should make clear the uncertainty and the possibility of "false positive" or "false negative" classification.[11]

Occupational high-risk cohorts often can be reconstructed with a high degree of accuracy once the risk has been determined. This is a key rationale of notification programs. Records maintained by company personnel departments, union membership rolls, the social security system, Internal Revenue Service, and insurance companies can be used to reconstruct cohorts employed in a specific workplace.[37,38] While this information may be somewhat irregular, incomplete, and non-specific, it is more likely to be retrievable than for non-occupational exposures.

The decision of whom to notify should be made on a case-by-case basis. It should have a sound epidemiologic basis and also make common sense. Monson has elaborated on the criteria for disease-exposure association in epidemiologic studies which also can serve as criteria for a notifiable high risk.[39] These include: consistency, specificity, strength of association, dose-response relationship, biologic plausibility, temporal relationship, and statistical significance.

Ideally, prior to notification, the impact of performing or not performing it should be considered, and the validity of the information available should be evaluated in light of the potential impacts. The validity of the data necessary to trigger a notification may be viewed as dependent on four parameters: the extent and seriousness of the risk, the consequences of notification; the implications of erroneous notification; and the consequences of the failure to notify. These parameters need to be considered and balanced. Failure to do so could result in, at least, four major types of effects: 1) excessive demand for medical and legal services when this is not warranted; 2) increased risk of morbidity or mortality from interventions (such as screening) in a groups not needing them, or not accurately defined; 3) increased risk of more serious disease prognosis due to delayed intervention; and 4) lack of public confidence as a result of failing to balance notification and impact variables.

Methods of Notification

Table 1 illustrates the variety of methods that have been used in notifications. Notifications may be personal (informed consent or letter) or public (labeling or media publication). Either (or a combination) may apply to worker notification, depending on the extent of exposure and the reliability of reconstructing the exposed cohorts. Worker notification is both a personal communication to the individual at risk and a public act with widespread consequences. The impact on the individual, the family, employer, union, and community can be large, explosive, and unpredictable. For this reason, the notification message and manner of presentation need careful consideration, and education programs for a cohort and its community are important components of a notification.[25,31] With chronic occupational diseases, such as cancer, it is necessary to communicate the concepts of latency and risk. It is important that medical personnel and the community-at-large be informed of the situation so they may respond accordingly.

One of the greatest problems in performing individual notifications is updating the vital status and address information. One previous study failed to correctly identify the address of 33 per cent of the cohort to be notified.[38,40]

Effective cohort tracing and notification will depend on cooperation on the part of the researcher-notifier and the appropriate companies and unions. Further, locating cohort members may require broadening access, already held by some government agencies but not available to private researchers, to Social Security, Internal Revenue Service, and Bureau of Motor Vehicle records. For government agencies, the requirements of the Privacy Act may need to be broadened to allow for public disclosure of the names of people at risk but who are unable to be located by routine methods.[13]

Based on current demonstration projects (see next section), a sizable percentage of former employees (usually 15–25 per cent) may have emigrated from the region where the exposure took place. In the absence of support networks, their needs are likely to be different from the needs of those who still reside in communities near the plant where the exposure occurred.

In some cases, the harmful agent may contaminate household residents and the neighborhood surrounding a plant, as has been found for asbestos[41,42] and suggested for beta-naphthylamine.[43] When this is the case, the considerations underlying notification of workers must be extended to the broader population at risk, with the realization that the exact population at risk may never be determined accurately.

Where appropriate, the notification program should be transmitted through organizations that are already in place and prepared to take on the development of follow-up services, such as the unions, employers, state or local health agencies, voluntary agencies, or churches. This type of arrangement serves two critical purposes. First, by relying on existing structures and networks, the potential for acceptance of the conveyed message is enhanced; however, the delegation of these functions does not relieve the initiating agency from appropriate quality control, which may require a long-term commitment. Second, reliance on existing structures enhances the potential long-term continuity vital to effective secondary and tertiary disease prevention in the future.

Medical Support Services

To minimize potential adverse effects of notification programs, all members of a notified cohort may need to have access to ongoing medical surveillance, counseling, education, and legal services, regardless of whether or not they develop the disease. Given the pluralistic nature of medical care and social services in the United States, the programs must be developed cooperatively and be community-based, relying on the mobilization of available resources.

With some diseases, early detection by screening may enhance survival and the quality of life in high-risk groups.[39,44,45] Screening may be effective for diseases such as high blood pressure and cancers of the colon,[46] bladder,[47] cervix,[48] and thyroid.[35] Usually, the need for repeated screening will last for the rest of the person's life.[49] Those being notified will need services of many types, some of which they will be able to acquire on their own and some of which will need to be instituted on a categorical basis. An agency or organization developing a notification program should be prepared to interact with service providers so that relevant information about the risks to the cohort can be delivered.

For some diseases, early detection by screening has not resulted in better prognoses than detection by symptomatology.[39] In these cases, the notification may be directed toward making the individuals at risk aware of key medical signs and symptoms, and making medical providers aware of the risk status of the cohort members. The medical provider could then recognize the disease earlier, and apply the least drastic and most effective clinical decision criteria to the case.

Current Demonstration Projects

At present, three demonstration projects in worker notification are being conducted by the National Institute for Occupational Safety and Health (NIOSH) or the Workers' Institute for Safety and Health. Together, these three pro-

TABLE 2—Comparative Characteristics of the Cohorts Notified in Demonstration Projects

		Comparative Characteristics of Cohorts							
Cohort	Location	Size/Race/Sex	Type of Work	Carcinogen	Target Cancer	Average Period of Exposure	Latency Period	Relative Risk	Medical Intervention Potential
Augusta Chemical Workers	Augusta, GA	1,150/70% Black/Male	Unskilled Industrial Non-union Low pay	Beta-naphthyl-amine	Bladder	1949–1974	18.6 yrs	4–111	Good
Pattern Makers	Nationwide	10,000 current, 2,000 former/All White/Male	Skilled industrial Craft Union High pay	Undetermined	Colon-Rectal	Unknown	Unknown	2	Good
Flint Glass Workers	Port Allegany, PA	1,200/All White/Male	Unskilled Industrial Union Medium pay	Asbestos	Lung	1964–1972	20 yrs	10–53	Poor

Sources: References 40, 54–57

ects give a cross-sectional picture of possible approaches to notification and intervention (Table 2). Although it is generally too early to evaluate the impacts of these projects, they represent an opportunity to give a cross-sectional view of characteristics of three different potential notification situations:

- The first project involves 1,113 living, predominately Black, male workers, some of whom face an estimated 111-fold increase in relative risk for bladder cancer due to workplace exposure to beta-naphthylamine from 1949 to 1972. Occupation is the greatest risk factor established for bladder cancer,[51] and beta-naphthylamine is one of the most powerful workplace carcinogens known.[52] The plant in Augusta, Georgia was one of several identified by NIOSH to be producing this type of chemical in the early 1970s.[53] In 1981, NIOSH sent letters notifying these workers of their risk status, encouraging them to obtain medical advice, and advising them to learn the warning signs of bladder cancer. A particularly noteworthy feature of this pilot program has been the active involvement of a local health department and the interaction of diverse community groups as the keystone for organizing a continuing program of medical surveillance, counseling, and education.[40]
- In the 1980s, three independent epidemiologic studies were published[54-56] that indicated that pattern and model makers, most of whom are members of the Pattern Makers' League of North America, may have a doubled risk of colon and rectal cancer. There are about 10,000 current and 2,000 former members of the League. They are almost entirely White males, highly skilled, and well paid. They are employed in about 700 workplaces in 27 states. Notification of risk was conducted by the League (in consultation with the Workers' Institute and NIOSH) using League newsletters and booklets sent to the membership. Plans for implementation of efforts to reduce potentially hazardous workplace exposures and for uniform medical surveillance provided by local community physicians were negotiated between the League and several hundred employers.
- In Port Allegany, Pennsylvania, approximately 1,200 members (all White male) of the Flint Glass Workers' Union are at high risk of developing cancers associated with workplace exposure to asbestos.[57] NIOSH identified this asbestos hazard in 1971 and informed the company and the union. Subsequently, after lengthy discussions, a non-profit community program was established with representation from the union, management, community groups, and medical providers, to provide notification, medical examinations, outreach, counseling, and education. This program has been extended to family members as a result of potential risk due to secondary exposure. Observers have characterized this program as a model of community collaboration to address a serious work-related health problem.[58]

Unresolved Issues and Questions

Many of the issues and questions concerning worker notification are unresolved as the demonstration projects now in progress have revealed. There is practically no literature on the subject.

The fundamental issue of whether or not workers are entitled to be notified about known health risks to which they may have been exposed even where exposure took place in the past has been raised in the public health community and in legislatures, but not resolved. The magnitude of the problem is vast. Lawsuits stemming from the failure to warn workers are threatening to undermine the structure of major industrial sectors.[59,60]

Notification programs will probably often result in litigation as employees seek redress for injuries or illnesses relating to the alleged violation of three common-law duties of employers: the duty to maintain safe working conditions, the duty to warn about dangerous workplace conditions, and the duty to inform workers about adverse results of medical tests. Another possible ground that has been considered is for an employee to seek redress under the product liability doctrine. This doctrine makes a manufacturer liable to a user of his product if the product is defective, if the manufacturer has knowledge of the defect, and if the defect causes injury.[61] The US government also has been sued as a supplier of asbestos without providing adequate warnings or health protection.[62]

Litigation is generally a measure of last resort to workers, and it is a poor approach because it fails to provide comprehensive programs to deal with the numerous and varied needs of high-risk workers.[63] No common-law remedies are available where the responsible company goes out of business or files for bankruptcy.

To date, no agency or researchers have been held liable for failure to notify members of cohorts they find to be at high risk. However, it is not unlikely that claims for redress may be sought in the future, particularly where failure to notify can be linked to failure to detect a disease at a treatable state.

Even if there is a general decision to notify, many other critical questions remain. When to notify? What level of risk is required to initiate the notification, and what degree of confidence is required in the risk estimate? These are clearly important questions in light of the massive cost involved in initiating follow-up support programs.

Individual or mass notification? Should notification be directed at the identified individual worker at risk, or should notifications be directed at the broader community? Should the level of risk involved determine the type of notification approach selected? Or, should the size of the population at risk determine the approach? If a mass notification approach is used, does a responsibility exist to evaluate the extent to which it reached the population at risk, and if found to be ineffective, is there a further responsibility for follow-up?

Who should be notified? The complexity of sorting out past exposure histories is known to most occupational health researchers. Should all employees at a plant during the period when the hazard was present be included, or should only those most likely to have been exposed be considered? How is that likelihood determined? Should populations with potential secondary exposures be included? How should unstudied populations with possibly similar exposures (and risks) be treated?

What level of effort? In a mobile society like ours, workers move within and between communities. What level of effort is required to reconstruct a cohort, update addresses, and make sure the notification message is received and understood? What level of effort is appropriate to ensure that cohort members avail themselves of the follow-up services? When does notification become harassment?

Who is responsible? Should the principal investigator on a study identifying a risk be responsible for initiating notification of results to all individuals at risk? Who should initiate the organization of follow-up services, particularly for dispersed cohorts whose members are located in all regions of the nation?

Who should pay? Implementation of notification and follow-up programs is costly. Should the cost of updating cohort addresses and subsequent notification about results be built into the budget for conducting research programs? The development of specialized follow-up service delivery systems is at present not covered by public and private sources. Is it reasonable to expect that cohort members, who have been placed at risk through no fault of their own, should bear these costs? Should the company which, under the Occupational Safety and Health Act, ultimately is responsible for providing a safe and healthful workplace, or the supplier which is responsible for providing a safe product, bear the costs, and if so, who should pay when the company has gone out of business after the time of hazardous exposures?

The psychological impacts and socioeconomic consequences of notifications have not been studied adequately. Various authors, however, have described the impact of labeling, categorizing, or stigmatizing individuals who are at high risk.[64,65] Haynes, *et al.*[65] found that labeling a person ill may result in reduced work attendance, regardless of whether the person is actually ill. Little research has been conducted on the prevalence or severity of such problems, and at present it is not possible to rule out that the stress of notification could lead to untoward psychological and medical effects.

It is not likely that the potential for adverse psychological effects would repudiate the rights of workers at high risk to be notified.[4,8] However, notification efforts should be sensitive to the potential psychological impacts, and provisions should be made to minimize them.

The socioeconomic consequences of being notified are potentially severe. As systematic data are collected on the associations between work history, exposure, severity of risk, and disability and medical claims, and as this information becomes disseminated, it could have a chilling impact on economic opportunities available to members of high-risk groups. At least one major computer information firm offers employers a special "workers' compensation information" service,[66] the purpose of which is to help the employer place "injury prone" workers in jobs where they will not be at high risk of injury. Often, however, the result may be to deny an equal opportunity in the job market to workers who have ever filed claims. Workers who are members of high-risk cohorts also are likely to be "tainted" in this fashion.

The insurability of the individual cohort member also may be impaired. Eligibility for health and life insurance coverage could cease and, because the disease risk is work-related, the individual could fall into the gap between health insurance and workers' compensation programs. Health insurance specifically excludes payment for work-related medical expenses, because these expenses are supposed to be covered by workers' compensation. However, workers' compensation covers only manifest diseases that are unequivocably work-related, and only within very specified time limits from the date the hazardous exposure took place.[67] Workers' compensation laws vary from state to state but, as a general rule, they specify that, to be covered, a disease must have been a consequence of work and not of anything else, and this often precludes compensation of chronic diseases that are multifactoral in terms of etiology. Many states have statutes of limitation on filing claims that exclude most cases of long-latent chronic diseases.[68]

In summary, the identification of cohorts at high risks brings into focus an emerging public health problem. At this time, a large number of these cohorts exists. Their members have generally not been notified, and so there is a "backlog" of substantial magnitude. Policies and procedures for responding to cohorts identified in the future have yet to be developed. Although public health concepts derived from years of experience in infectious disease control and in chronic disease detection and management form a framework for evaluating this new problem and developing solutions, many complex policy issues remain to be resolved.

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Notification of a Cohort of Workers at Risk of Bladder Cancer

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Surviving members of occupational cohorts studied in retrospective analyses of mortality usually are not notified individually of positive study results. However, concern has arisen that such results may contain risk information pertinent to study subjects. To evaluate the effects and implications of individually notifying survivors of such cohorts, we conducted a pilot notification study. Members of a cohort of 1,385 chemical workers who had handled carcinogenic amines were notified by mail that they were likely to be at increased risk of bladder cancer. Also a bladder cancer screening and follow-up program was established. The study demonstrated that notification is a complex action and that much care needs to be taken when communicating information on risk. Notification requires development of (1) criteria as to what constitutes a notifiable risk and (2) programs to meet the medical and social needs of the various parties involved in notification.

In 1979, the National Institute for Occupational Safety and Health (NIOSH) undertook a pilot study to evaluate the issues and practical problems involved in individually notifying members of a cohort of chemical workers of their possibly increased risk for occupationally induced bladder cancer.[1] This cohort had worked at a plant in Augusta, Ga., where carcinogenic amines, such as β-naphthylamine (BNA), benzidine, and o-toluidine, had been manufactured or used since the 1940s.

This study derived its impetus from a congressional inquiry concerning the question of whether NIOSH routinely notified study subjects of epidemiologic results.[1] Of particular concern to the Congress were retrospective cohort mortality studies that involved linkage of personnel records to mortality records. While such linkage requires no informed consent, it does involve individually identified records. NIOSH routinely notifies companies, trade groups, unions, the Occupational Safety and Health Administration, the Mine Safety and Health Administration, and state health and labor departments of the results of such studies, and the results are typically published in the scientific literature and reported in the media. However, it has not been common for NIOSH to notify individual cohort members of study results.

Many questions impinge on the issue of notification of subjects of the results of epidemiologic studies.[1-6] These issues range from ethical considerations subsumed under the rubric, "the right to know," to technical considerations concerning the limitations of the epidemiologic method to discern individual risk. Although many of these issues are unresolved, there is an emerging consensus that individuals have a right to be informed of risk information about themselves when such information is held by an institution such as a government, corporation, university, or labor union.[1-3]

The cohort selected for notification in this study had not (prior to the notification) actually been found to be at increased risk in a previously conducted retrospective cohort mortality study. That study is in progress. However, based on the fact that the cohort was known to have had heavy exposure to proved human carcinogens, the investigators believed that an excess risk was likely to be present and that the cohort would be found to have an excess incidence of bladder cancer.

Although various groups, such as asbestos workers[7] and vinyl choride workers,[8] have previously been notified of excess risks, the study reported herein is believed to be the first actual evaluation of the procedures and impacts of notification. It was designed to identify practical problems associated with notification and to develop a model for future use in similar situations. Also a concomitant effort

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was made to assess the risk for bladder cancer in this cohort; the results of that epidemiologic risk assessment will be discussed in a companion article.

Methods and Materials

Cohort Ascertainment – As a prerequisite to notification, it was necessary for NIOSH to acquire the names, addresses, and current vital status for all members of the cohort. In 1972, NIOSH researchers had microfilmed all pertinent personnel records from the company. The records consisted of a card on each worker containing the following information: name, address, date of birth, department, jobs worked, date of work, wage, Social Security number, spouse's name and address, and name and address of a person to notify in event of emergency. Not all records were complete, and the degree of incompleteness was quite variable. The information from these personnel records was coded, keypunched, and stored in a computer file and served as a basis for notification.

The cohort at risk was defined to include all hourly employees who ever worked at the company between Jan. 1, 1940, and Dec. 31, 1972. From review of the personnel records, a total of 1,385 individuals were included in the cohort. The sex and race distribution of the cohort is presented in Table 1; 32% of the males were identified as white, 66% as black, and 2% were of unknown race.

In 1979, the cohort list was sent to the Social Security Administration (SSA) and to the Internal Revenue Service for determination of vital status for each worker; address information was sought for those alive, and state of residency or of SSA claim-filing for those deceased. Additionally, the list was sent to the state bureaus of motor vehicle registration in Georgia and South Carolina for further address information. In some cases, address confirmation was requested from the main post office in Augusta. After completion of those efforts, 269 (24%) members of the cohort were still of unknown vital status or apparently deceased, but with no indication as to why they had died or where their death certificates were located. These files were referred to a commercial firm with experience in tracing subjects for epidemiologic studies.

Table 1 – Sex and Race Distribution of the Augusta Cohort as Derived From Personnel Records

Sex	No.	% of Cohort
Male	1,313	94.8
Female*	72	5.2
Total	1,385	100.0
Race (Males)	**No.**	**% of Males**
White	415	31.6
Black	871	66.3
Oriental	1	0.1
Unknown	28	2.0
Total	1,313	100.0

* Of 72 female workers, 68 were white, two were black, and two were of unknown race

On Jan. 20, 1981, it was established that of 1,385 individuals in the cohort, 272 were deceased, and 19 had no address available. Consequently, we assumed that the number who could potentially be notified was 1,094. The geographical distribution of these surviving members of the cohort is shown in the Figure: 789 (73%) had addresses in or within a 50-mile radius of Augusta. These were designated as the "in-town" group. Those with addresses at more distant locations were designated the "out-of-town" group. This stratification by distance was a necessary prerequisite for developing the notification and medical screening strategies.

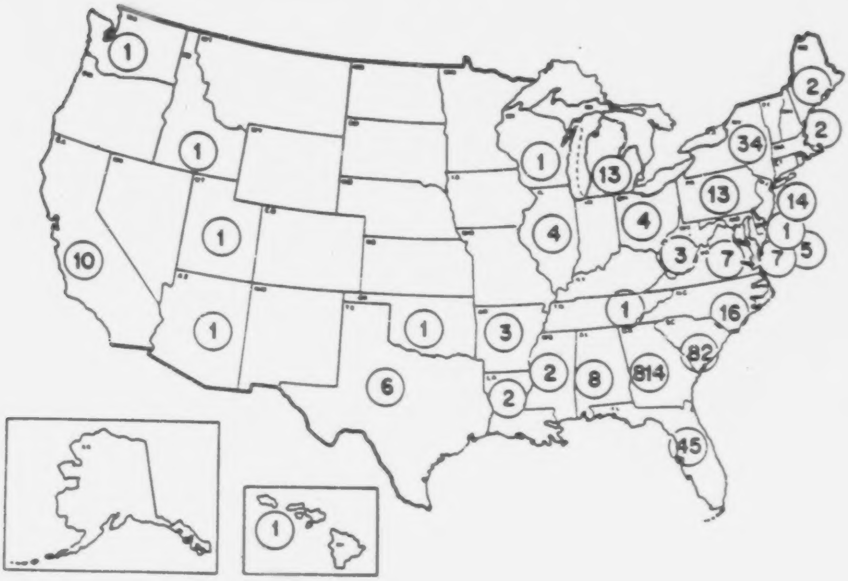
Development of the Notification – From the outset, we considered notification to be a multistage process rather than a single act. The effort would be triggered by NIOSH. However, we envisioned that media, community groups, local agencies, and individuals within the cohort would serve as additional sources of notification. Therefore, we determined from the outset of this study that assessment of the efforts of these groups must be included in the evaluation of the effectiveness of notification.

Personal notification by first class U.S. mail was the approach selected for initial contact. This approach was considered to be a method of notification most likely to be used by NIOSH in future notifications, and therefore it was appropriate to evaluate this approach in this demonstration project.

Although the degree of risk among cohort members was not considered to be homogeneous, three factors led us to make a decision that the same initial notification message should be sent to all members of the cohort. First, because of the amount of missing information on job assignment and because of the multiplicity of chemical exposures among workers in the plant, the personnel records were not an adequate basis for identification of the extent of exposure. Second, reports from the NIOSH investigators who first evaluated the plant in 1972 indicated that the plant historically had been dusty and dirty and that all employees had potential exposure to aromatic amines. Third, since BNA is an extremely potent carcinogen that has been shown to cause cancer with apparently minimal exposure, we were concerned that a decision not to notify some members of the cohort might represent a breach of ethics.

The initial notification letter was developed with the assistance of appropriate members of the Augusta community. An effort was made to include in the letter the point that risk is a probabalistic concept and not deterministic. The primary letter was designed merely to notify a person of his risk and to indicate that something could be done to try to manage this risk. The letter did not try to answer all possible questions, but rather was intended to give enough information so that a person would be motivated to enter a program of medical surveillance. Contained in the letter was a telephone number for clinic appointments or general information. Although there was concern that a substantial proportion of the cohort might be functionally illiterate, we nevertheless believed that a letter would be the most effective medium for initial notification. The initial letters were mailed on Aug. 28, 1981.

Those members of the cohort who failed to respond and



Geographic distribution of the Augusta cohort, 1980.

whose initial letters were not returned by the post office as undeliverable by the end of three months were sent a second notification letter. This letter was designed to emphasize that an asymptomatic state was no proof that a person would remain free of disease. Those members who still did not respond to the second letter were telephoned six months later. The following information was sought in these telephone contacts: (1) whether the person had received the notification letter, (2) whether the person had understood it, (3) and what the person intended to do about it. Further information was supplied if requested. If a person indicated that no further contact was desired, that request was acknowledged.

The "out-of-town" cohort members had an opportunity to respond to notification in two ways: either by returning an enclosed postage-paid form (including their telephone number) indicating their desire to participate in screening (to be arranged with a physician in their own community), or by calling (collect) a number specified in the notification letter. Nonresponse for this group was followed by a second and third letter and then, if necessary, by telephone, where telephone numbers could be obtained.

A staff member in the Richmond County Health Department was charged with the task of locating valid addresses for those Augusta-area subjects whose letters were returned as undeliverable. He traced cohort members using such sources of information as city directories, voting rolls, and telephone books, as well as through direct contact and extensive discussion with members of the cohort and with various relatives and friends of missing cohort members.

Related Program Components — Simultaneous with planning of the notification itself, we developed several related program activities. In particular, a medical surveillance program focusing on screening, early detection, and treatment for bladder cancer was organized as a special clinical activity in the Department of Family Medicine of the Medical College of Georgia (located in Augusta). An initial screening of all cohort members was funded by NIOSH as a part of this project.

We recognized that for two reasons it would be most important to enlist the help of the County Health Department and of local physicians in this effort: (1) for support of the project during its initial stage (at the medical college) and (2) for provision of future care and medical surveillance after withdrawl of the federal presence. Hence, we held three meetings with the local medical societies to encourage cooperation of their members. Subsequently, we sent a detailed letter giving an overview of the project to approximately 900 physicians in the region. A key feature of the letter was the statement that the County Health Commissioner would serve as the registrar of cases identified in the future. The Richmond County Health Department was, therefore, to serve as the focal point of an ongoing surveillance system.

Also, in this connection, an ad hoc committee of the Richmond County Board of Health, the Hazardous Substances Committee, was created to serve as a community-based group that would maintain ongoing concern and advocacy for the needs of the cohort. The committee consisted of a member of organized labor, a member of the business community, a member of the community-at-large, and a representative from the company and was chaired by the Commissioner of Health. The charge to the committee was to support the project and to encourage the development of ongoing programs.

Prior to the mailing of the initial notification letter, we held meetings with the regional and local chapters of the American Cancer Society, the general community, the Richmond County Health Department, Medical College of Georgia, legal aid services, and the media. Experienced field workers were engaged to assess the community. They identified and enlisted the assistance of many people (particularly in the black community) who were concerned about the problem and who expressed a willingness to participate in the development of the project.

From both a research and a service perspective, these community programs were considered to be important; they were intended to enhance participation in the screening program and to provide supplementary information to the cohort. Moreover, we were of the opinion that this strong community participation would assist cohort members and their families in dealing with the immediate and subsequent psychological and social impacts of notification.

To further involve the cohort, a second committee, the Committee of Concerned Citizens (CCC), was formed under a grant from the National Cancer Institute and was incorporated as a nonprofit organization. This committee consisted of people from the cohort and others who knew members of the cohort personally or were similar to them in socioeconomic status. This committee indicated that it intended to work closely with the cohort to encourage participation in the screening and to achieve financial support for members of the cohort. A staffed office of the CCC was established so that the CCC could respond to inquires from the cohort, promote participation in the screening, and serve as advocate for the workers.

An important component of the notification effort was the mobilization of the print and television media. The goal of the media contact was to furnish general information, to encourage participation in the project, and to minimize fear and anxiety. The media contacts were usually accomplished by means of interviews and press conferences.

We expected that the relationship between the notification effort and these other activities would be sequential in that:

1. The notification letter would initiate the program and would make reference to the other program components.
2. The activities of th CCC and the media would reinforce the impact of the notification letter and promote participation in the available services.
3. The medical surveillance (and other services) would serve as an inducement to participate in the project by providing benefits of value to the subjects.

We recognized that there was no way in which we could separately examine the effects of these various components in our evaluation of the project.

Tracking of Responses to Notification – Tracking of the notification and monitoring of the response was performed by means of a series of master logs. These logs maintained information on the status of each cohort member vis-à-vis response to the initial or subsequent letters, progress through the phases of the screening program, and diagnosis. Regular contact, in person and by mail and telephone, allowed for coordination of the logs. The logs and their eventual tabulation served as the basis for extracting lists of nonrespondents who would then receive further letters. Items of interest and concerns of the cohort members or of the contractors were also recorded in the logs.

Evaluation of Response – To assess the impact of notification, we (1) tabulated the sources of notifications as reported by cohort members, (2) computed rates of participation of the cohort in screening programs, (3) described the reaction of selected portions of the community to the program, and (4) conducted a content analysis of the local print media. Subsequent articles will discuss in further detail the psychosocial effects of notification.

For the in-town group, the principal anticipated response was the setting and keeping of an appointment at the screening clinic. An equally valid but, from the investigational point of view, less desirable response was an indication from the person that he/she was already seeing a physician for assessment of urinary function. A questionnaire was administered to each participant in the screening program. It contained questions about source of notification and about the participant's awareness of the risks of BNA exposure. Responses to these questions were tabulated and evaluated.

Two approaches were used to evaluate the role of the media. The first approach was descriptive. We compiled the chronology of media involvement and related it to parallel. events. Second, we conducted a content analysis of the local newspaper coverage based on all BNA-related articles that had appeared in the *Augusta Chronicle* between 1968 and Aug. 1, 1982. This analysis included an enumeration of article topics and an evaluation of the frequency with which these articles amplified or supplemented the notification. A semantic content analysis, following the method described by Andren,[9] was used in this study and focused on the following variables: (1) specification of exposure to a carcinogen, (2) distinction between a probable and an absolute occurrence of disease, (3) identification of the asymptomatic period or the latency period, (4) presentation of information on the screening clinic, (5) discussion of the possible responsiveness of bladder cancer to treatment, (6) identification of the symptoms, (7) identification of other risk factors, and (8) expression of the need for ongoing surveillance.

Results

In the initial notification mailing to the Augusta cohort, 1,094 letters were sent (Table 2). Between August, 1981 and December, 1981, five hundred fifteen (64%) of the in-town recipients and 181 (61%) of the out-of-town recipients responded to this mailing in some manner. This response included making an appointment at the screening clinic, calling to declare no interest, or indicating intention to be screened privately. For the out-of-town group a response involved mailing to NIOSH a postage-paid card that was included with the notification. For the entire cohort, 364 (33%) letters were returned as undeliverable.

Table 2 – Notification and Response Rates for the Augusta Cohort

Total No. in cohort	1,385		
No. assumed deceased prior to notification	272		
No. with no address available	19		
No. assumed alive and sent first letters (8/27/81)	1,094		
Geographic Distribution	**In-Town**	**Out-of-Town**	**Total**
No. actually eligible to receive notification letters	798	296	1,094
No. of letters returned as undeliverable (% of eligible)	277 (35%)	87 (29%)	364 (33%)
No. who responded in any manner between 8/27/81 and 12/3/81 (% of eligible)	515 (64%)	181 (61%)	696 (64%)
No. of second letters sent (12/3/81)	283	115	398
No. of second letters returned as undeliverable (% of eligible)	187 (22%)	58 (20%)	245 (22%)
No. assumed to be notified directly (% of eligible)	611 (77%)	238 (80%)	849 (78%)
No. screened or in process at sponsored clinics by 9/1/82* (% of those notified)	433 (71%)	153 (64%)	586 (69%)
No. who indicated they were seeing their own physician	39 (6%)	22 (9%)	61 (7%)
No. who were out-of-town but screened in-town	. . .	8	8
Total No. screened (% of those notified)	472 (77%)	183 (77%)	655 (77%)

* Excludes an additional 47 persons, who worked for contractors, serviced the plant, or worked for the adjacent railroad and were also screened

By September, 1982, four hundred thirty-three (71%) of the in-town and 153 (14%) of the out-of-town workers, who were assumed to have been notified, had been screened or were in the process. Another 61 (39 in-town and 22 out-of-town) individuals indicated that they were already seeing a physician for screening or treatment related to their urinary system.

For the in-town cohort, of those who received the letter, 556 (91%) had read it and said they understood it, and 458 (75%) said that they had discussed it with another person. Similarly for the out-of-town cohort, of those who reported receiving the letter, 231 (97%) said they had read it, 226 (95%) said they had understood it, and 188 (79%) said they had discussed it.

Several reasons were identified for the failure of letters to be delivered: invalid address, moved with forwarding address expired, moved with no forwarding address extant, no such address, or residence burned. The in-town screened subjects consisted almost entirely of males, and two thirds were black (Table 3). Most had little formal education and relatively low incomes. Twenty-seven percent said that they had other family members who worked at the company.

Demographically the out-of-town cohort was similar to the in-town cohort only in sex distribution. It had fewer blacks, more education, slightly different distribution of marital status, and generally higher incomes.

Awareness of BNA – Of the in-town cohort who attended the screening clinic, approximately 245 (65%) said

Table 3 – Demographic Characteristics of In-Town and Out-of-Town Workers Who Participated in the Screening Clinic

Variable	% In-Town (n = 378)		% Out-of-Town (n = 137)
Sex			
Male	94.0		97.1
Female	6.1		2.9
Age, yr	Male	Female	Male
25-29	3.7	4.8	...
30-34	15.6	0.0	8.7
35-39	13.1	4.8	11.3
40-44	10.5	4.8	14.0
45-49	14.2	19.1	12.7
50-54	14.2	19.1	21.3
55-59	13.6	33.3	14.7
60-64	6.5	14.3	10.0
65+	6.5	0.0	7.3
	Male and Female		
Race			
White	32.4		52.6
Black	67.5		47.4
Education, yr			
<8	30.9		25.9
9-12	55.3		45.1
>12	13.8		28.9
Marital status			
Married	64.9		84.1
Divorced	12.9		9.4
Separated	10.0		4.3
Widowed	5.0		1.5
Never	7.1		0.7
Income, $			
<5,000	12.1		13.7
5,000-10,000	23.9		16.3
10,000-15,000	19.9		22.9
15,000-25,000	18.4		23.5
25,000-30,000	4.9		6.5
>30,000	3.5		13.1
Chose not to answer	18.4		3.9

that they had previously heard of BNA (Table 4). Overall, the majority, 227 (60%), said that they had first heard about BNA while working at the company. Fifty-seven (15%) indicated they had first learned of BNA from the newspaper, 27 (11%) from talking with someone, and 25 (6.5%) from the NIOSH notification letter. Sixty-nine (28 (28%) said that they had heard of BNA for the first time in 1981. The largest percentage, 167 (44%), had heard about it in the period 1949 through 1967. Of the 69 who first had heard of BNA in 1981, 49% learned by newspaper, 22% by NIOSH letter, 20% by other means, and 9% by conversation. Of those who indicated that they had ever heard of BNA, 51% indicated that they had worked with it, and 32% said they did not know whether they had. Prior experience in the grinding room (a putatively high-risk work area) was indicated by 49%, and another 10% indicated they did not know if they had worked there.

Table 4—Knowledge of BNA and Associated Risks for Workers Screened In-Town and Out-of-Town

Variable	% In-Town (n = 378)	% Out-of-Town (n = 137)
Ever heard of BNA prior to notification	64.7	38.4
Date of first knowledge of BNA		
1949-1967	43.9	60.4
1968-1972	20.5	18.9
1973-1980	3.2	1.9
1981	27.7	17.0
Cannot remember	4.6	1.9
Source of first knowledge		
Employment at Augusta chemical company	59.8	66.0
Reading newspaper	15.1	7.5
Talking with someone	10.6	9.4
NIOSH letter	6.5	3.7
Other	7.7	13.2
Ever worked with BNA		
Yes	51.3	75.7
No	16.1	24.3
Do not know	32.6	...
Worked in grinding room	49.4	32.1
Reason to believe BNA was harmful		
Yes	25.1	19.2
No	71.9	80.8
Don not know	3.0	...

When asked if they had any reason to believe that BNA might be dangerous or harmful to them in some way, approximately 72% said "no," and 3% said they did not know. Of the 25% that did have reason to believe that BNA was dangerous, 8% learned of this danger from a plant official; 15% from a co-worker; 17% from a label; and 61% from past health complaints such as skin discoloration, burns, bumps, sneezing, or urinating blood.

Approximately 52 (38%) of the out-of-town cohort said that they had previously heard of BNA. Table 4 shows when and how the workers first learned this information. Seventeen percent said they they had first heard of BNA in 1981, 19% between 1968 and 1972, and 60% between 1949 and 1967. The majority (66%) said that they had heard about it while working at the company, 7.5% said that they had first learned of it in the newspaper, 9% by talking with someone, 4% by NIOSH letter, and 13% by other means, which most frequently included television. Of those who indicated that they had ever heard of BNA, 78% indicated that they had worked with it, and 32% said that they had worked in the grinding room. When asked if they had any reason to believe that BNA might be dangerous, 81% said "no."

Evaluation of the Role of the Media – The media played a dual role in this notification. They were both a part of the notification process and a register of its impact. For those people whose addresses were unknown, media coverage was the primary route of notification. For others, media served to amplify or supplement the information conveyed. Fifteen percent of the in-town cohort indicated that they first learned of BNA from the newspaper, and 20% said that the media were the most convincing sources of information that motivated them to participate in the screening.

Most of the local newspaper coverage was by the *Augusta Chronicle*, the larger of the two major local newspapers. It ranked "β-naphthylamine" the fourth most important news story in 1981. The newspaper's series on BNA was submitted for a regional Pulitzer Prize.

Two facets of the *Augusta Chronicle* coverage were controversial. During the preparatory phase of the project, we made an effort to apprise representative members of the community of the nature of the project and to solicit their participation. At the same time, we were strongly of the opinion that widespred publicity should be avoided until a response capability was in place. We were concerned that publicity constituted de facto notification and that premature publicity would trigger unnecessary fear and anxiety among people who had worked at the company as well as in other members of the community. We were concerned also that preliminary publicity would stimulate a demand for medical services before these services were available. Despite our repeated requests for prudence, the *Augusta Chronicle* "broke" the story of the notification effort on Jan. 30, 1981.

To accommodate the reaction of concerned cohort members to that premature announcement, we established a hotline at the Richmond County Health Department three days after the initial article appeared. In the month subsequent to the publication of the article, 27 calls were received on this line. Most callers inquired as to the date of the clinic opening or if certain individuals had been exposed to BNA.

The second controversial newspaper article was a story published on July 13, 1982, in the *Augusta Chronicle* entitled "Ex-Chemical Workers Sought." The article listed the names of 121 former company employees who had not received notification letters due to unknown address. Such publication of the names of individuals potentially invades the privacy of the cohort members and may have been a violation of the Privacy Act of 1974 (5 U.SC. 522a). The information was supplied to the *Augusta Chronicle* by the CCC after they had received it from the Richmond County Health Department, which in turn had received it from NIOSH. No authorization was given by NIOSH for the Health Department to provide this information via the CCC to the *Chronicle*. However, the actions of the Health Department and more specifically of the CCC were consistent with the task of locating cohort members and were motivated by concern that people be screened. Subsequent to the publication of the article, approximately 40 additional people were located. None indicated displeasure with the publication of their names. We believe, however, that, in general, this "leak" substantiates the point made in the publication *A Study of the Issues in Locating Assessing and Treating Individuals Exposed to Hazardous Substances* (National Center for Health Statistics, 1981) that "a balance must be struck between the protection of individual privacy and confidentiality on the one hand and the health of the individual on the other."[10]

Content Analysis of Local Newspaper Coverage – A total of 52 articles on BNA appeared in the *Augusta Chronicle* between 1968 and Aug. 1, 1982. The first article, in 1968, was the earliest public mention in Augusta of the use and risk of BNA.[11] The article included the statements that BNA is "extremely hazardous . . . and . . . produces bladder cancer."

The next article appeared approximately 13 years later on Jan. 30, 1981. It was entitled, "Program to Inform Chemical Workers of Cancer-Causing Chemical." This article was the first of a series. Subsequent articles in the series dealt with seven major topics: (1) prenotification delay, (2) notification, (3) the screening clinic, (4) funding for the future, (5) locating cohort members, (6) results of the study, and (7) litigation. A total of 31 articles on BNA were published in Augusta in 1981, and 20 in 1982.

As would be expected, 92% of the articles specified the exposure, chemical, and company. In descending order of frequency, the following additional topics were mentioned: the screening program, 68%; the asymptomatic nature of the early disease and its latent period, 34%; the probabilistic nature of the risk, 16%; the responsiveness of bladder cancer to treatment, 16%; the need for ongoing surveillance, 14%; and other risk factors for bladder cancer, 4%.

The *Chronicle* coverage was also evaluated for its description of the extent and magnitude of the social, political, and legal problems associated with notification of the cohort. The major concerns expressed were for personal financial plight (16% of the articles) and funding for future surveillance (14%). Fear and anger on the part of cohort members were mentioned (8% of the articles); 6% made reference to occupational disease in the community. Two percent of the articles mentioned each of the following: the potential of the community to be exposed to BNA from the plant; concern about whether other family members of cohort members were at risk; family disruption; and current job-related problems of cohort members. Blame for creating this problem or for failing to respond promptly to it was directed at the company in 12% of the articles and toward government (local, state, federal) in 10% of the articles.

Television Coverage – One of the three major television network affiliates provided especially extensive coverage of this project. A total of 29 different reports were broadcast two times each on either the 6 or 11 o'clock news or the "Midday" report. The television ratings showed that the news reports reached 117,000 viewers and that the "Midday" report reached 150,000 viewers in Georgia and adjacent South Carolina.

Additionally, on Monday, Nov. 17, 1982, the station broadcast a 30-minute prime-time documentary entitled "Lethal Labor." This documentary provided an overview of the entire situation and presented coverage of the seven aspects previously discussed in newspapers.

Other Impacts of the Notification – Various anecdotes provide further evidence of the impact of the notification. One worker was temporarily suspended by his current employer (not the company that owned the plant in question) until he had been screened at the Medical College Clinic. Another worker, attempting to borrow money at a bank, was told that his credit rating had been lowered due to his membership in the high-risk cohort.

More than 80 lawsuits have been filed against either a supplier of BNA or the company that owned the plant in question. Many of the lawsuits appear to have been initiated by people with no evidence of bladder cancer but who had concern about their risk and about the funding of future surveillance.

Discussion

The notification of cohorts at high risk of disease involves interrelated scientific and social issues. Notification is a social action triggered by scientific information and research. Following a notification, there are needs for further social actions and additional scientific information. For discussion purposes, it is useful to examine these issues separately.

Scientific Issues – *Basis for Notification* – The ethical basis for individual worker notification is the possession by an investigator of both the names (and often the addresses) of cohort members and risk information about the cohort.[1,3,5,6] The quality of the risk information is critical to deciding whether or not to notify. Notification projects should not be undertaken in the absence of a solid scientific foundation. Epidemiologic data in particular, but also toxicologic and industrial hygiene information, provide the basis for demonstrating exposure–disease associations or excess risks that are topics for potential notifications.

Epidemiologic information by definition, however, pertains to groups of people rather than individuals and is therefore probabilistic. While all scientific determinations are probabilistic, the demonstration of association or causality in epidemiologic studies is notably so, owing to the multifactorial etiologies, individual variation, and the inability of the investigator to achieve totally controlled study conditions. Therefore, it may be possible to be fairly precise in concluding that the findings of an epidemiologic study are not due to chance, but such precision may not be available to document the web of causation or the degree of confounding and interaction as it applied to an individual cohort member. Nevertheless, using generally recognized scientific criteria, epidemiologic studies have demonstrated disease-exposure relationships with enough specificity, especially in occupational situations, to identify causal agents, subsequent risks, and related diseases. For these reasons, the epidemiologic data guided the development of the project and now provide the basis for planning its future. In the course of the project, it has become possible to go from general data to more highly specific data concerning who is at risk.

Because the exposure history of the cohort was poorly characterized, it was decided to treat all members of the cohort equally in terms of notification methods. Subsequent to the notification and attendant case finding, history taking, and medical screening, it has been possible to characterize the cohort in greater detail. Consequently, the cohort is now being stratified based on risk estimates, and a more differentiated screening program is being designed to target the frequency and content of future medical surveillance.[12]

Criteria for a Notifiable Risk – Critiera for what constitutes a notifiable risk need to be developed. The need for such criteria is particularly evident when a study yields results where the risks are interpreted as being very small. Here it is important to distinguish between the small probability of a common disease from the large probability of a rare disease. In these cases the criteria should include evaluation of the magnitude of both absolute and relative risk. Failure to utilize explicit criteria in the evaluation of study results for notification may result in large numbers of people being notified when they are not at risk.

Social Issues – *Communitywide Efforts* – The results of this study corroborate our contention that notification is not a single act but rather the first stage in a long process that involves not only the cohort, but also their families and community. The Augusta project has demonstrated that, initally, precise individual notification was not always achieved and that a subsequent message was needed to explain specifically who was at risk and what kind of surveillance was recommended. The community activities that surrounded the notification stimulated interest in the project and reinforced the interest of the media. The combined effect, in terms of amplifying and supplementing the notification, was much greater than initially anticipated.

Additionally the CCC performed a vital function in maintaining communication with the cohort. One independent reviewer of the project, who was retained by NIOSH for evaluation, described the CCC as "one of the most positive aspects of this project" because it represented an effort to involve the target population in the planning and implementation of a program that would impact upon it.[13]

Nonnotification – In the Augusta project, a relatively large number of people could not be located (approximately 22% of the target population) despite rigorous search efforts. Other ways to find former workers need to be developed. The risk characteristics of these lost people are not known and need to be evaluated. Also, further characterization is needed of those workers assumed to have been notified (because their letters were not returned by the post office), but who have not responded. Efforts are underway now to find and talk with these people, but the process is slow and difficult. The balance between the individual's right to privacy and the investigator's responsibility for protecting public health will always be delicate and require judgment. However, if notification programs are to be truly effective, the interpretation of the Privacy Act may have to be broadened to allow appropriate groups to assist in locating "hard-to-find" individuals.

Local Agencies – This project demonstrated the utility of involving local agencies in dealing with a high-risk occupational cohort. In this case, the Richmond County Health Department performed invaluable service in helping to locate cohort members, stabilize a potentially volatile situation, and provide a focus for seeking long-term funding and continuity of the program.

Community Education – A notification program should be considered a health education program for the entire community. It involves not only the cohort at risk, but their families, their company and union, their current employers, and the community at large, as well as physicians, lawyers, the media, religious groups, social services agencies, and local and regional government. The Augusta project demonstrated that, eventually, all of these groups will become involved as a result of notification. These groups have wide-ranging concerns and need information and education. Table 5 shows the types of information needed in the Augusta project.

The thrust of the educational component concerns not merely the plight of an individual cohort, but occupational disease in general. Indeed, because of the concern that is raised by such projects, they offer the opportunity for widespread and effective health education about toxic substances and chronic diseases. Moreover, the process of notification demonstrates the depth and magnitude of the impact of occupational disease on the human as well as the abstract statistical level.

The Establishment and Funding of Services – Many lessons learned from this project appear applicable to notifications in general. Subsequent to a notification, a cohort will have a variety of sociomedical needs, such as medical screening, treatment, counseling, and ongoing follow-up. The funding of these services will be a primary need of many cohorts. It is unclear who is responsible for providing these services and under what conditions. It would seem that the courts or Congress will have to resolve this issue. Under any circumstances, the initiator of a notification should be responsible for at least interacting in the planning and development of screening and surveillance services by providing the relevant information that it has about a particular cohort. This may include demographic, epidemiologic, or therapeutic information.

Litigation – Until more appropriate mechanisms are found, initiators of worker notification projects can expect to become involved in litigation and, in particular, to be called on to provide epidemiologic and medical information in litigious proceedings. In the Augusta study, the various investigators have testified in legal proceedings and have had their records subpoenaed.

Conclusions

This project represents an example of a program designed to meet the needs of a group identified as being at high risk of occupational disease. There are many such groups that will need this type of program. The control of occupational diseases such as cancer induced by aromatic amines requires not only primary but secondary prevention. Notification is the first step in secondary prevention. Unfortunately there is only a patchwork of programs to meet the needs of high-risk groups. A more systematic approach is needed and until it is initiated, there will be no recourse for workers other than litigation.

The potential implications of the Augusta project for agencies and institutions that perform epidemiologic studies are striking. At the present, individual notification of former employees who were subjects of epidemiologic record studies is not customarily done, nor are there criteria for doing it. If, however, this study is seen as a precedent, there may be increased pressure on investigators to notify individual subjects. This effort would ultimately involve hundreds of thousands of people.

Table 5 – Type of Information Necessary for a Notification Program

Aspect	Information Needed
1. Identification of cohort	a. Personnel records b. Epidemiologic findings from retrospective mortality studies
2. Location of cohort addresses	a. Community contacts b. Social Security Administration, Internal Revenue Service, Bureau of Motor Vehicles, subject tracing, and social services
3. Development of message	a. Differential risk information b. Screening availability c. Therapeutic potential d. Socioeconomic status characteristics of cohort
4. Notification of community physicians	a. Address information b. Epidemiologic and animal data on exposure-disease association c. Plans for case finding d. Recommendations for follow-up
5. Notification of community and media gatekeepers	a. Extent of risk, i.e., to family and to the adjacent community b. Other target organs c. Information from 3*a*, *b*, *c* d. Surveillance requirement e. Symptomatology and risk history
6. Supplementary cohort education	a. 5 *a-e* b. Risk factors
7. Screening	a. Evaluation of approach b. Inclusion criteria
8. Results dissemination	a. Evaluation of ascertained cases b. Screening results
9. Surveillance recommendation	a. 1*a*, 8*b*
10. Monitoring impact	a. Psychosocial information b. Research data
11. Participation in legal process	a. All of the above

Future notification efforts will require the following: (1) a resolution of the technical matters relating to individual notification, (2) development of criteria as to what constitutes a notifiable risk, and (3)development of societal solutions for the problem of compensation and funding for ongoing medical surveillance. This study has begun to address the first two of these needs.

If notification of subjects becomes part of epidemiologic studies, both the notifiers and the subjects need to become more sophisticated in handling risk information. Epidemiologic information needs to be presented in such a manner that nonscientists can make some sense of it. The classic admonition that epidemiologic information pertains to groups and not to individuals must be reflected in notifications.

Finally, as new research allows for the exploration of disease markers, genetic predispositions, or indicators of previous exposures, it will be likely that the issues raised in this study will again need consideration. The Augusta project may provide useful guidelines for future notification efforts.

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THE EPIDEMIOLOGIC BASIS FOR THE NOTIFICATION OF SUBJECTS OF COHORT STUDIES

PAUL A. SCHULTE

The issue of whether to notify surviving subjects of the positive results of retrospective cohort mortality studies has been raised by the United States Congress (1) and by the media (2), but has not so far been debated in the epidemiologic literature. At issue is the question of whether or not investigators have failed to inform subjects of studies about risk information that might be of concern to them. The general practice of epidemiologists has been not to individually notify surviving subjects comprising study cohorts, the publication of study results not withstanding. It has, however, been argued (3–9) that the subjects of epidemiologic studies have a right to know of results indicative of excess risk, that investigators have a duty to inform them of such results, and that these rights and duties are consistent with the legislative and public policies of the last 20 years. Still, the unanswered scientific question is whether there is an epidemiologic basis for notifying surviving subjects of cohort studies. If so, what assumptions are made in the process, and what issues and criteria should be considered prior to notification?

The fundamental premise of this commentary is that subjects of retrospective cohort mortality studies should be notified of results if the results contain risk information about them, and if that information is held by an investigator who is a member of an institution with public responsibility such as a government agency, corporation, university, or labor union. This obligation derives from the fact that investigators have both the names and addresses of cohort members, as well as risk information about them (4). Although the issues discussed herein pertain to cohort studies, in general, the focus will be restricted to occupational retrospective cohort mortality studies.

Retrospective cohort mortality studies are based on an evaluation of the experience of the deceased members of the cohort compared with what would be expected if the experience of some standard comparison population, such as the US population, was applied to them. These studies involve identification of cohort members, usually through personnel records. Vital status of each study participant is determined using company records, and by cross checking with such agencies as the Social Security Administration, the Internal Revenue Service, Bureau of Motor Vehicles, and private locators. If a cohort member is deceased, the death certificate is sought and the cause of death is determined by a nosologist. Statistical comparisons of the mortality experience are then conducted. Nowhere are individuals in the cohort contacted or subject to the requirements of "informed consent."

METHODOLOGIC FEATURES OF COHORT MORTALITY STUDIES

Demonstration of excess deaths

If the ratio of observed to expected for a particular cause of death, as summarized

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Abbreviation: SMR, standardized mortality ratio.

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by the cause-specific standardized mortality ratio (SMR), is greater than 100 and is statistically significant (usually at the 0.05 level), then a study is considered to have demonstrated excess cause-specific deaths (10). Before declaring such findings truly positive, an investigator typically evaluates whether the apparent association is consistent with other findings, is biologically plausible, indicates a dose-response relationship, and is generally in conformity with a number of commonly recognized criteria (10). In short, the investigator asks if the findings make sense and are consistent with other work. If the findings of a study are novel, they will generally require additional studies for confirmation.

Inherent limitations

Given a duly derived positive finding that adheres to these criteria, are the results pertinent to cohort members? That is, for example, would a person who understands epidemiology want to know if he or she was a subject of a positive cohort study or are there inherent or conceptual aspects of the cohort mortality study methodology that produce results that have no relevance for surviving cohort members?

Numerous cohort mortality studies have been performed. The methodology is classically exemplified in the study by Doll and Hill (11) of smoking in physicians, and that by Lloyd and Ciocco (12) of the long-term mortality of steelworkers. Critiques of the method and discussions of its limitations also have been adduced. Greenland (13) demonstrated the problems of inadequate follow-up. Wang and Miettinen (14) criticized the use of the general population as a valid reference population due to lack of comparability of effects, populations, and information. A standardized mortality ratio (SMR) has been shown to be affected by differences in the age distribution between an occupational cohort and a reference population. Gaffey (15) has shown that age-specific SMRs may vary even if the relative risk is the same at all ages. This results because an SMR and a relative risk are not the same. Fleiss (16) has defined a relative risk in terms of the probability of death (i.e., the proportion of persons who die in an interval), while an SMR is defined in terms of mortality rates (i.e., the number of deaths per person-years of observation). Enterline (17) has described how overlap between exposure and follow-up can hinder the determination of a dose-response relationship in cohort studies. Through all of this examination, the conceptual basis of the retrospective cohort mortality study has not, however, been repudiated, and such studies continue to be performed by researchers in private and public organizations (18–22).

The findings of cohort mortality studies are usually presented for publication, and for occupational investigations are often disseminated to workers by their unions or management, and sometimes by the media. There are no studies of the extent to which study results reach cohort members, but my experience indicates that various occupational cohorts contain large numbers of subjects who may not learn of results because of their relocation, retirement, or termination of employment.

Pertinency of study results to cohort members

Do cohort mortality studies contain information that warrants proceeding beyond general dissemination of results to notifying individuals? Positive epidemiologic studies in general, and cohort mortality studies in particular, produce results that indicate an excess of cause-specific deaths compared with some standard. It is not specious to interpret these results as indicating an excess risk, even though, to be precise, this excess is a ratio of observed to expected deaths. A risk is a probability of developing or dying from a disease in a given interval, conditional on not dying from any other causes during that interval. It is a dimensionless quantity that can vary between one and zero (23). It is customary to use the term risk or its derivatives (e.g., risky, at-risk, risk factor, etc.) in a much broader sense than suggested by the narrower definition (23). The notification of study subjects would accentuate the broader definition of risk indicating that the probability of a cause-specific death in a cohort is more than would be expected if the mortality rates of a standard population were applied.

In a positive study, the risk of cause-specific death is greater than in the standard population. The risk, however, is applicable to the cohort as a whole and does not pertain to individual members in a way that would allow one to inform an individual worker that he or she is at risk of a certain disease. This strict interpretation is not violated in individual notification if the individual is informed of the cohort risk concept and of the fact that risk is a probabilistic rather than a deterministic phenomenon.

The issue is portrayed by the following example. In 1974, a mortality study (24) was performed on a cohort of workers at a vinyl chloride production plant. The study demonstrated an excess of deaths due to angiosarcoma of the liver (SMR = 1,155). Put another way, the chances that the cohort would experience more angiosarcoma deaths than in a similar, but not exposed cohort, were approximately 11 to 1. If you are a member of that cohort, your risk would not necessarily be 11 times "normal" but, as part of such a group, if you were exposed to vinyl chloride you probably would have some increased risk of angiosarcoma. There appear to be no inherent limitations that mitigate against the logic in that statement of risk. Excess deaths can be used as an indicator of risk.

Risk to survivors

The next question that arises is whether the surviving members of a cohort have the same risk of a specific disease or death as the deceased, or if the excess risk is restricted to the deceased. It is possible that those who died of the cause in question had some greater exposure, were more sensitive, or had some other characteristics not shared by the remainder of the cohort. This is particularly likely if the deceased workers were employed at an earlier date than the survivors since exposures to occupational toxins were typically greater in the past than today (42). The assumption that risks for surviving members are similar to those of the deceased needs to be evaluated, as part of the consideration for notification, on a cohort-specific basis. Some of the survivors are likely to have the same occupational characteristics as the decedents, and probably share similar risks. Follow-up mortality studies on cohorts previously evaluated generally still show excess risks, even if they are somewhat lower than in the initial evaluation (25). However, in some cases, risks are actually increased (26).

Simultaneous inferences

As with most comparative studies, differences between observed and expected mortality in retrospective mortality studies are evaluated with regard to the likelihood that they are related to the hypothesis in question (i.e., reject the null hypothesis) rather than to chance. In this regard and assuming statistical independence, a certain percentage of studies or standardized mortality ratios within studies, typically five in 100, will appear to be positive when, in fact, they are not. A notification should not be based on a chance positive finding.

In a cohort mortality study, usually one or a few causes of death (expressed as standardized mortality ratios) are identified in a priori hypotheses to be in excess. In addition to evaluating the hypothesized causes, the investigator usually looks at all other specific causes. These other causes that are not part of the a priori hypothesis can be considered as a posteriori hypotheses. Formal hypothesis testing of these findings may not be appropriate, but if a posteriori hypotheses are generated the implications of simultaneous inferences need to be considered (27, 28).

Weighing the decision to notify

Despite the ascertainment of a "true" excess risk, notification may conflict with the medical maxim "primum non nocere"—"above all, or first, do no harm" (29). There are two salient manifestations of this conflict. First, within a cohort or in a series of cohorts, there will most likely be false notifications. These may be categorized in a 2 × 2 characterization of notification decisions and risk status (figure 1) which contains two cells where there will be false notifications, that is, notifying when there is no risk (false positive) or failing to notify when there is a risk (false negative). Epidemiologic data may be used to differentiate subcohorts at risk and reduce many false positive notifications. False negatives are less likely, in as much as the whole process of notification may be viewed as an effort to reduce false negatives. However, false negatives will result when faulty data are used for risk differentiation and subsequent notification.

The second manifestation is whether there should be notification when there are no effective methods of intervention (early detection or treatment). It is a premise of this commentary that this is a public policy consideration but that a person has a right to risk information regardless of whether there are intervention possibilities. The epidemiologic questions with regard to the effectiveness of early detection and treatment are secondary to this consideration. This is an arguable premise that merits discussion but the discussion should not be limited to epidemiologists.

		Notification Action	
		N	$\bar{N}$
	R	N R	$\bar{N}$ R
Risk Status			
	$\bar{R}$	N $\bar{R}$	$\bar{N}$ $\bar{R}$

FIGURE 1. Classification of notification decisions with notification action and risk status considered as dichotomous variables. $N\bar{R}$ = false positive notifications; $\bar{N}R$ = false negative notifications.

PROPOSED CRITERIA

There appear to be no strong inherent limitations in the design and interpretation of cohort mortality studies that are contraindications for notification when excess risk is evident. Notification, however, is a powerful action that has an impact on many individuals and groups (4, 8). The potential for these impacts to be debilitating and costly demands that notifications be accurately targeted and based on sound research. There are no explicit criteria for what constitutes a risk of which a subject should be notified.

This absence of criteria for what constitutes a notifiable risk could lead to many false notifications. The burden of such false notifications can be substantial not only for individuals but also for their families and for many other sectors of society (4, 8, 30). A person notified of a risk, but who does not develop the disease, has many of the same needs as one who does. The establishment of explicit criteria for notification is critical to the orderly evaluation of research results as they pertain to surviving subjects. This proposal for establishing criteria for notification is not meant to be a final statement on this important subject, but, rather, a starting point to begin discussion of the matter.

Methodologic integrity

Studies that are candidates for notification should not be evaluated merely on their adherence to some decision algorithm. Each study needs to be assessed for methodologic integrity, consistency with other findings, and for specific cohort exposure and disease characteristics that might mitigate a decision concerning notification.

The same criteria that apply to evaluation of disease-exposure associations may be used for deciding whether there is a notifiable high risk, although there can be notifiable risks even if the cause is not known. Monson (10) has elaborated on the criteria and has included consistency, specificity, strength of association, dose-response relationship, biologic plausibility, temporal relationship, and statistical significance. Complete adherence to all these criteria is not necessary for notification to be indicated. Rather, there needs to be a sense that the study was methodologically sound and the excess risk is not spurious.

Since many retrospective cohort mortality studies do not address all confounding influences, it is possible that an excess risk of disease may be related to some nonoccupational factor or to some occupational exposure other than that under study. In such cases, the finding of an excess may not be in error, but the identity of the cause could be in question; this may not relieve the need to notify since the risk is apparently real. For example, 10,000 automobile and agricultural-implement pattern and model makers were notified of a two-fold risk of colon and rectal cancer as a result of three epidemiologic studies (31–33). Although the employees' work involved numerous toxic and carcinogenic substances, none was imputed as causal, and in fact, there is a strong likelihood that there is a socioeconomic component to the etiology. Nonetheless, this group appears to have an excess risk and its union, the Pattern Makers League of North America, felt that notification was warranted (4). On the other hand, if, upon subsequent review, some strong comparison or other type of bias is found, a risk might be considered specious and should be rejected as a subject for notification.

Adjusted statistical significance

The problem of simultaneous inferences is acutely evident in retrospective mortality studies where, in addition to hypothesized cause-specific SMRs, often all possible cause-specific SMRs are evaluated. For notification purposes such studies should be considered positive only if they meet a level of statistical significance that is adjusted for simultaneous inferences. Jones and Rushton (27) have reviewed some of the adjustment methods appropriate for epidemiologic studies and indicate that the effort to adjust is more important than the actual approach selected. They support the use of a Bonferroni-type adjustment because of its wide use. Another method, described by Sidak (28), is similar to this but allows for a calculation of an exact adjusted α level.

The exact adjusted α level for each of k independent SMRs can be determined from the formula

$$(\text{adjusted } \alpha) = 1 - (1 - \alpha)^{1/k}$$

where α is usually 0.05 (28).

This adjustment assumes a worst-case scenario (independent tests) and therefore is a lower bound to the exact adjusted α level. Causes of death are mutually exclusive events but not independent. However, despite the lack of independence, the issue is still valid because the probability of finding at least one standardized mortality ratio that is significant (given that there are actually none) would be greater than 0.05 in most mortality studies. This procedure provides a way of reducing the number of spuriously significant standardized mortality ratios in a cohort mortality study. It represents a conservative measure that would apply to the extreme case of total independence. In the condition of partially dependent events, it still provides a lower bound on the individual significance levels. This conservative approach is justified when a notification action might be triggered by a significant finding. It is suggested that this adjustment method be applied to a priori and a posteriori analyses separately. In this way, the power of the study would not be sacrificed because typically, only one to five causes of death are hypothesized prior to the study, *k* would be relatively small, and hence the individual significance levels would not be reduced appreciably. In contrast, where there are a posteriori evaluations, as many as 80 causes of death might be surveyed, *k* would be large, and the power would be reduced. Loss of power in a posteriori evaluations is considered justifiable in the interest of a rigorous testing procedure considering the unexpected nature of a positive result.

Magnitude of absolute lifetime risk

The previous discussion has been about standardized mortality ratios which are relative risks. The magnitude of the absolute risks also needs to be considered, when deciding whether to notify, in order to define where risks are so small as to be insignificant subjects for notification.

Absolute lifetime risks may be defined as the sum of background risks for a given disease and any incremental risks associated with a specific exposure. To illustrate how a criterion for absolute risk magnitude would operate with regard to notification, cancer risks will be considered. Cancers represent the cause of death of interest in many mortality studies and they have often been considered in discussions of risk assessment methods.

The background risk component of absolute risk has been calculated as probabilities of developing site-specific cancers. For purposes of this discussion, the probabilities calculated by Zdeb (34) using a life table approach, will be considered. They range from risks of the order of 10^{-2} for lung cancer to 10^{-4} for monocytic leukemia (in males).

The incremental component of absolute risk has been discussed by the Office of Technology Assessment in a document on carcinogen risk determination as a basis for regulation (35) in which a framework for decision-making about incremental risks was suggested:

> . . . risks above a certain level (10^{-3} to 10^{-2}) might be declared unreasonable no matter what, and risks below a certain level (10^{-8}) might be declared reasonable, acceptable or negligible. In between, the risks that range from 10^{-8} up to 10^{-3} or 10^{-2} would require balancing of the risks and benefits to decide whether or not to regulate.

Both Albert (36) and the Office of Technology Assessment have suggested that "substances associated with individual lifetime risks of 10^{-5} might be considered as presenting risks so low that they require no action to reduce them further." This same level was discussed by a working group at the national conference on Ethical Issues in Worker Notification held in Pacific Grove, CA, June 3–5, 1981, and sponsored by the Western Institute for Occupational and Environmental Science and funded by the National Cancer Institute. The group suggested that risks less than 1 in 100,000 did not need notification. There was no specification, however, of whether this meant a lifetime risk or an annual risk.

For the purposes of identifying notifiable risks, the decision-making framework from the Office of Technology Assessment document is useful and may be applied to the probabilities for developing cancer. Accordingly, if the sum of background risks and incremental risks were such that the absolute lifetime risk is greater than 10^{-3}, notification would be warranted. If the absolute risk was in the range of 10^{-3} to 10^{-6}, other quantitative criteria would need to be applied, and if the risks were less than 10^{-5}, notification would generally not be warranted.

A number of caveats and conditions must be placed on this scheme. 1) The magnitude of risk criterion is only meant to be applied to positive studies after the other criteria of methodologic integrity and adjusted statistical significance are met. 2) It is assumed that the absolute risk will be of the same order of magnitude as the background risk. Therefore, the use of background risks, such as those calculated by Zdeb (34), will be satisfactory as the scale on which to make notification decisions for positive studies. 3) In the categorically non-notifiable range of risks smaller than 10^{-6}, it might be worthwhile to consider an additional criterion of relativity of risks, so that risks greater than a relative risk of 10 would become notifiable. This may not apply to most chronic occupational diseases, but eventually it could be of concern as rare markers become subjects of investigations. 4) Positive studies with risks within the range 10^{-3} to 10^{-4} would be potentially notifiable, but because of their relative smallness, there is a likelihood that the presence of a significant standardized mortality ratio (SMR) could reflect methodologic factors rather than factors related to disease-exposure associations. These methodologic factors include the use of an external comparison group in the form of national mortality rates, and the fact that "at older ages the SMR is subject to limitations in possible values more or less independent of any hazard to which the study population may be exposed" (15). Since these factors could influence a study outcome with the result being positive for otherwise borderline associations of relatively rare diseases, a fairly restrictive minimum standardized mortality ratio should be used for deciding whether to notify.

It is proposed here that a standardized mortality ratio of 300 for diseases with a lifetime risk between 10^{-3} and 10^{-5} be the minimum acceptable if notification is to take place. The choice of a three-fold elevated standardized mortality ratio for a disease with a lifetime risk of less than 10^{-3} is arbitrary. It was chosen to reflect the concern that an excess of disease found in studies where there is a higher probability of a spurious finding (due to relatively low incidence and small excesses) should be conservatively evaluated because of the negative effects it might cause in people not at risk, but who are falsely notified. Figure 2 displays the three notification decision risk ranges.

The argument for delineating notifiable risks should not be confused with attempts to balance the impact of notifying or not notifying a group truly at risk. Such an exercise repudiates the premise of this commentary, that is, the right of people to know of their own study results and hence their cohort's risks, if some institution or individual has that knowledge. Implied by this right, however, is the understanding that the investigator has some degree of certainty or confidence in the information (within the bounds of the appropriate disciplinary conventions), and that, given that everyone is at some risk, the information is meaningful. Where the risk information is uncertain enough, and indistinguishable enough from the background, the investigator has the responsibility to consider the rights of a group (including not only workers but families, communities, and employers) not at risk, who may be wrongly drawn into the labeling process, and thus suffer undue consequences.

Three studies reported in the literature illustrate the application of these quantitative criteria. Waxweiler et al. (24) reported a standardized mortality ratio (SMR) of 1,155 (seven observed, 0.6 expected) for biliary and liver cancer in a cohort of workers exposed to vinyl chloride. Using Zdeb's (34) calculations, the lifetime risk for liver cancer would be on the order of 10^{-3} (2.1/1,000). Since the study was based on a hypothesis concerning liver cancer and four other cancer sites, there would be need to adjust for simultaneous inferences so that the significance level would be reduced to 0.01. The SMR still was significant at this adjusted level, and, since the SMR was greater than 300, the study results would be subject to notification.

In contrast, in a study of motor vehicle examiners exposed to carbon monoxide, Stern et al. (37) found an SMR of 235 (four observed, 1.7 expected) for brain tumors (classified as malignant gliomas). The probability of developing cancer of the brain is on the order of 10^{-3} (3.4/1,000 in males). However, in this case, brain cancers were not hypothesized prior to the study, and numerous simultaneous inferences were made as part of the a posteriori in-

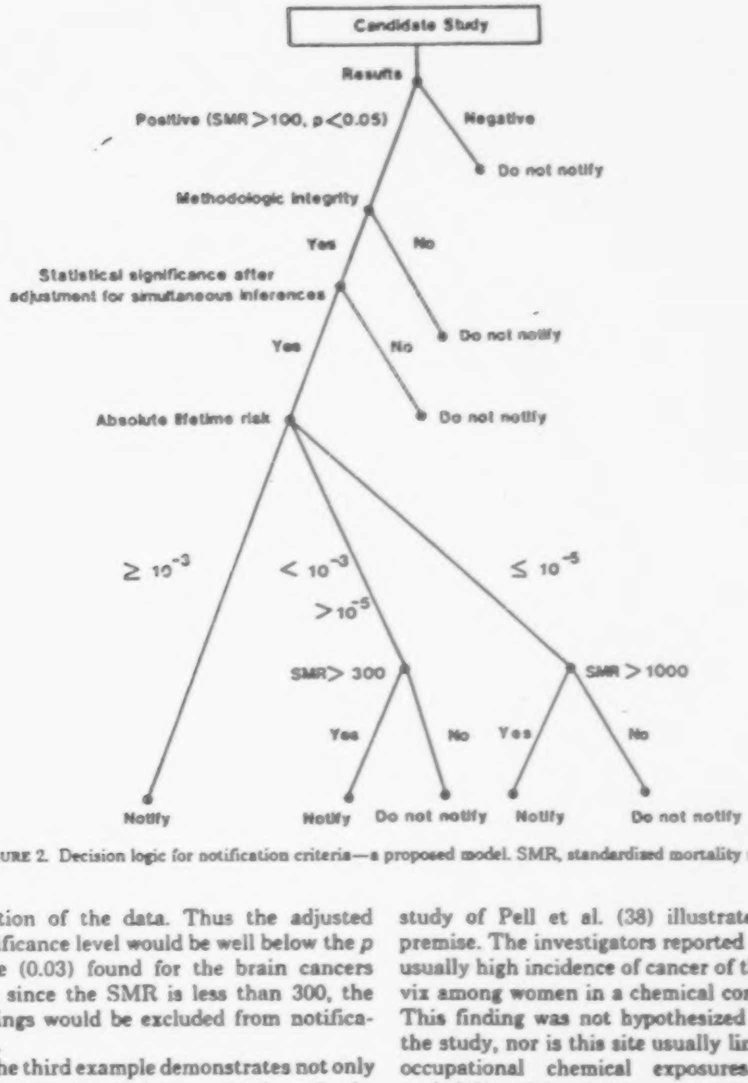

FIGURE 2. Decision logic for notification criteria—a proposed model. SMR, standardized mortality ratio.

spection of the data. Thus the adjusted significance level would be well below the *p* value (0.03) found for the brain cancers and, since the SMR is less than 300, the findings would be excluded from notification.

The third example demonstrates not only the application of the quantitative criteria, but also one of the previously mentioned premises of this commentary, namely that a risk found in a methodologically sound study is a subject for notification regardless of whether it is occupationally related. Although the foregoing discussions have involved mortality studies, the incidence study of Pell et al. (38) illustrates this premise. The investigators reported an unusually high incidence of cancer of the cervix among women in a chemical company. This finding was not hypothesized before the study, nor is this site usually linked to occupational chemical exposures. The probability of developing cancer of the cervix uteri, according to Zdeb (34), is on the order of 10^{-2}. This would definitely be in the range of a notifiable risk, at least before adjustment for simultaneous inferences. Based on the table of standardized incidence ratios in the paper by Pell et al. (38), it can be assumed that at least 21 sites were evaluated. Hence, using the formula for adjusted statistical significance, the p value would have to be less than or equal to 0.002 to be statistically significant. In this case, the p value for 141 observed and 60.5 expected cases is less than 0.00001, or highly significant. If the study was found to be methodologically sound, the risk of cancer of the cervix would be a subject for notification even though it could not be explained by occupational factors. On the other hand, as Pell et al. (38) discussed, the unusually high rate may merely reflect early casefinding as a result of the company's cancer screening program. If that could be substantiated, it would show that there may not be an excess risk and notification might not be warranted.

DISCUSSION

Notification is not a single communicative act but, rather, the initiation of a process with far reaching consequences (4). These consequences involve not only those notified, their families, and communities, but include also the medical, legal, business, media, government, and social welfare sectors.

Moreover, the impact on the investigator and institution initiating the notification is significant and long lasting. It may involve subsequent activities ranging from meetings with local medical societies to testifying in litigation proceedings. For these reasons, failure to notify in an instance when the results of a study are positive could leave an epidemiologist in a vulnerable legal and moral position. Speaking on this issue, John Fletcher (38), bioethicist for the National Institutes of Health, has said that epidemiologists performing record-linkage studies may have to join other biomedical scientists who have the obligation to notify study subjects. It is therefore important that criteria be established for this action. Epidemiologic research is not designed to provide risk specifications for individuals, yet the fears and concerns of individuals potentially exposed to deleterious conditions hinder them and others from appreciating the complexities of such research. At the same time, specifying that an individual is part of a group found to have an excess of deaths due to specific or unknown causes does not appear to violate epidemiologic principles and should be considered an obligation of investigators or their sponsoring institutions. In practice, the notification of individuals will involve not just composing and dispatching initial communications, but also may include, in some circumstances, meeting with local physicians and other concerned individuals, assisting in the development of appropriate screening or tertiary prevention programs, and generally responding to the situation.

The goal of establishing the criteria suggested in this paper has been to provide a systematic framework for minimizing false positive notifications. Since frequencies of false positives and false negatives are interrelated, minimizing one will increase the other. Notification, however, is inherently an action for reducing the number of "at risk" people not notified (i.e., reducing the number of false negatives). The question then becomes one of weighing the significance of the resultant increase in false positive notifications. This increase should be guarded against by the application of strict criteria. There has been little study of the effects on those who are not at risk, but who are notified that they are, and hence must go through the rest of their lives thinking and behaving as a group labeled "at risk." This group will have many of the same medical and social needs as those truly at risk. A false positive notification may also affect family members who, realizing that this is an example of "crying wolf", could be skeptical about other health warnings.

Another area of consideration is the issue of negative results. Should the subjects of studies with negative results be told of the findings? There does not appear to be the same ethical duty to disclose negative results as there is with positive results. While notification about negative results might be consoling or assuring to some people, it is probably not worth the effort involved. Moreover, as Hernberg (40) has noted, "theoretically the negative study requires an infinite number of observations or at least a large number" to test the null hypothesis.

If the notification of subjects of positive retrospective cohort mortality studies is an obligation that has been overlooked by epidemiologists, then the criteria suggested here may be useful in meeting that obligation. Although there are decidedly epidemiologic questions involved, this issue goes beyond the epidemiologic community because it reflects a societal situation that needs a societal solution (41). Such a solution might involve legislation that would mandate such action and provide compensation for those notified.

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Interventions in High-Risk Occupational Cohorts: A Cross-Sectional Demonstration Project

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In 1980, the Workers' Institute for Safety and Health began a demonstration project designed to develop a model program of community-based intervention in three cohorts with different workplace exposures and target cancer sites. Program components included identification, notification, medical surveillance, education, social support services (eg, psychosocial, legal, financial, etc), and evaluation. The three cohorts included (1) the Augusta cohort, a group at risk for bladder cancer due to workplace exposure to β-naphthylamine; (2) the Port Allegany cohort, a group at high risk of cancer associated with a workplace exposure to asbestos; and (3) the Pattern Makers cohort, a group shown to be at increased risk of colorectal cancer. Together, these three projects give a cross-sectional view of possible approaches to educational and medical intervention strategies in diverse situations.

Numerous cohorts of industrial workers have been identified by epidemiological or industrial hygiene investigations as being at high risk of work-related diseases, especially occupational cancers.[1,2] These studies have been conducted by government agencies and investigators in universities, private companies, and labor unions. Generally, the members of these cohorts have not been notified individually about the study results, even where the potential for health protection and disease prevention has been significant. Approaches to notification and intervention for high-risk occupational groups are fraught with methodological, organizational, and economic difficulties that have as yet to be adequately addressed.[3,4]

This paper presents three projects that attempt to demonstrate the kinds of intervention that should occur in groups at high risk of disease. Such programs are not designed as trials but as demonstration projects. The objective of each of these projects is to provide a comprehensive response for each high-risk group.

Current Demonstration Projects

Between 1980 and 1984, three intervention projects in worker notification were conducted by the Workers' Institute for Safety and Health under a grant from the National Cancer Institute. One aim of these projects was to develop a model intervention approach for future implementation in high-risk groups.

From the outset, it was recognized that certain organizational criteria would have to be met if a successful model approach were to be developed. The approach would have to be practical and inexpensive to allow for application by generally nontechnical union personnel within the budgetary constraints under which unions operate. Additionally, it would have to be capable of addressing fundamental flaws observed in previous notification/intervention attempts. As Samuels reported: "Past programs in notification and intervention have been subject to four major deficiencies: failure to use existing networks of communication, particularly those

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of the appropriate labor organizations; reinforcement of attitudes and activities that perpetuate dependence on others to make vital, personal decisions in health maintenance; ignorance of the long-established fact that where behavioral control is justified, it will occur most effectively through peer groups removed from the hostility of the workplace and with family involvement and community support; and failure to enhance the ability of the worker and his family to manage the legal, financial, and psychological problems of lifelong surveillance, intervention, and treatment, and in many cases death."[6]

The three demonstration projects conducted by the Workers' Institute were selected to give a cross-sectional view of possible approaches to notification and intervention situations (Table 1). Program quality and effectiveness were measured in the short term by process indicators and some preliminary behaviors and health outcomes.

Augusta, Georgia, High-Risk Cohort Project

This project was conducted in collaboration with the National Institute for Occupational Safety and Health (NIOSH). It involved 1,094 living, predominantly black, male workers who faced an estimated fourfold increase in relative risk for bladder cancer due to workplace exposure to β-naphthylamine (2-naphthylamine) during the period 1949 to 1972. Occupation is the strongest risk factor established for bladder cancer, and β-naphthylamine is one of the most powerful workplace carcinogens known.[6,7] The plant in Augusta was one of several producing this type of chemical and was identified by NIOSH in the early 1970s.[8]

In 1981, NIOSH sent letters notifying these workers of their risk status and encouraging them to obtain medical advice and to learn the warning signs of bladder cancer. At the same time, a medical screening program was established by NIOSH. A basis of the concept was that early diagnosis followed promptly by appropriate medical therapy might reduce the risk of cancer death.[9] The community-based support aspect of the project was directed by the Workers' Institute. A community steering committee and a community office were established to represent the workers. Educational programs for the workers and their families were held, as were community information meetings. Because of the extensive community organization, an ongoing screening program is likely.

Pattern Makers' League of North America

In early 1980, three independent epidemiological studies indicated that pattern and model makers, most of whom are members of the Pattern Makers' League of North America, might have a doubled risk to mortality from colon and rectal cancers.[10-12] The members of the union (approximately 12,000 active and retired workers) are almost entirely white male, highly skilled, and well paid. They are employed in about 700 workplaces in 27 states and 3 Canadian provinces.

Notification of risk was conducted by the league in consultation with the Workers' Institute through league newsletters and booklets. This nationwide notification was combined with training sessions for the business managers in each union local. A comprehensive cancer prevention and control program was developed by the Workers' Institute that included changes in work design and practices, education, and identification of local medical providers to conduct ongoing, standardized medical surveillance for the target sites of cancer. Again, this effort was based on the concept that early detection of colorectal cancer and treatment of premalignant stages (eg, polyposis) of disease would reduce mortality.[13]

Notable in the effort was the development of negotiated plans with management of several hundred companies for implementation of efforts to reduce potentially hazardous workplace exposures and to provide uniform medical surveillance which was, by and large, conducted by local community physicians. In terms of evaluation and research, this effort represents a unique project in that it probably is the first multicenter intervention program in occupational medicine. It also represents a unique, union-initiated response to an occupational hazard.

Port Allegany, Pennsylvania, Asbestos Health Program

Approximately 1,200 workers, most of whom are members of the Flint Glass Workers' Union in Port

TABLE 1
Comparative Characteristics of Cohorts Notified in Demonstration Projects[3]

Cohort	Location	Comparative Characteristics of Cohorts							
		Size/ Race/Sex	Type of Work	Carcinogen	Target Cancer	Average Period of Exposure	Latency Period	Relative Risk	Medical Intervention Potential
Augusta chemical workers	Augusta, GA	1,150/70% black/ male	Unskilled, industrial, nonunion, low pay	β-naphthylamine	Bladder	1949-1974	18.6 yr	4-111	Good
Pattern makers	Nationwide	10,000 current, 2,000 former/ all white/male	Skilled, industrial craft union, high pay	Undetermined	Colon-rectal	Unknown	Unknown	2	Good
Flint glass workers	Port Allegany, PA	1,200/all white/ male	Unskilled, industrial, union, medium pay	Asbestos	Lung	1964-1972	20 yr	10-53	Poor

Allegany, Pennsylvania, have been determined to be at high risk of developing cancers associated with workplace exposure to asbestos at a glass and insulation products plant.[14] This cohort consists almost exclusively of white males who were potentially exposed during the years 1964 to 1972. NIOSH identified the asbestos hazard in 1971 and informed the company and the union. Asbestos insulation production was subsequently halted. After lengthy union-initiated discussions, a nonprofit community program was established. The local governing board of the Port Allegany Asbestos Health Program (PAAHP) includes representation from the union, the company, the medical community, and the clergy. From 1980 to 1984, the Workers' Institute and Mt Sinai School of Medicine, New York, provided advice and consultation. PAAHP provides education and information, maintains an office for scheduling activities and recording results in an ongoing cohort registry, and contracts for periodic medical surveillance. This program has been extended to family members of exposed workers as a result of potential family risk due to secondary exposure. Observers have characterized this program as a model of community collaboration to address a serious work-related health problem (*Business Week*, Sept 7, 1981, pp 248-C).

Methods and Materials

The impacts of various intervention methods are being evaluated in the three identified cohorts. While these intervention projects involve aspects other than screening, the focus here is limited to the screening methods. General descriptions of the screening protocols developed for each of the projects are described below. In addition to the medical procedures listed, information was collected from each program participant on questionnaires constructed to solicit detailed occupational and medical histories, symptomatology, and identified risk factors for the target site of cancer.

Augusta Project

The intervention program in Augusta was designed collaboratively by NIOSH and the Workers' Institute. The screening protocol was developed in consultation with a urologist and in conjunction with researchers and physicians at the Medical College of Georgia in Augusta. It involved a two-phase operation: an initial or primary screening phase to identify all workers suspicious for bladder cancer, and a subsequent diagnostic phase for a definitive determination in those cases that met the criteria for referral in the primary screen. The primary screening consisted of several components:

1. Physical examination, emphasizing the urogenital system;
2. Routine urinalysis, emphasizing hematuria and pyuria;
3. Urine cytology: routine Papanicolaou staining using the method of Bales[15]; and nuclear fluorescence spectrophotometry using the method of Hemstreet and West.[16]

Referral of a program participant for a diagnostic urological evaluation was based on a "positive" finding on any of the following primary screening criteria:

1. **Occupational History.** A "positive" was any person who indicated during questionnaire administration having worked in the BNA Grinding Room (a high-exposure area in the plant) and/or any person identified from company personnel records as having a work assignment in a high-exposure job.
2. **Medical History.** A "positive" was any "yes" answer to stipulated questionnaire items regarding urinary tract, kidney, or bladder problems since Jan 1, 1979; hematuria in the last 2 years; or current dysuria, nocturia, and/or pelvic pain.
3. **Physical Examination.** A "positive" was evidence of bladder neoplasm such as a pelvic mass.
4. **Urine Cytology.** A "positive" was any nonnegative finding (atypical, suspicious, or positive) finding by Papanicolaou cytology (read by a cytopathologist).

Those satisfying the decision criteria were referred to the Urology Section of the Department of Surgery of the Medical College of Georgia for a diagnostic evaluation. This evaluation included the following:

1. Confirmation of urologic history;
2. Repeat urinalysis and urine cytology;
3. Radiological evaluation of urinary tract, if appropriate;
4. Cytologic analysis of bladder washing by Papanicolaou and nuclear fluorescence techniques;
5. Cystoscopy for all subjects with a designated high-risk occupational history, hematuria, current hematuria, or nonnegative cytology unless there was a relevant medical contraindication. (Subjects with pyuria were referred to their own physicians for treatment and were reevaluated for bladder cancer when the pyuria was cured.)
6. Random site biopsies for all subjects who were cystoscoped and who had a nonnegative cytology, unless medically contraindicated.

Pattern Makers Project

Screening of pattern makers focused primarily on colorectal cancers and possible pulmonary obstruction. Precautionary testing was also conducted for urinary tract disease. The protocol was developed in consultation with the Yale University Occupational Medicine Program. It was designed to be consistent with similar efforts that were underway at the General Motors Corporation and the Ford Motor Company. While this project was developed to incorporate many biomedical research questions, the main emphasis was on demonstration of the intervention model and, for the majority of the league members, the medical examinations were carried out by contracting with community physicians who were responsible for the care of the subjects. It was, therefore, recognized that the clinical judgment of the examining physician took precedence over the protocol requirements, and that standard medical contraindications for specific procedures would be observed.

The Figure describes schematically the process of (1) screening, (2) decision criteria for follow-up, and (3) appropriate follow-up action. The screening program included the following:

1. **Physical Examination.** Emphasis on gastrointestinal symptoms, including a digital rectal and prostate examination;
2. **Urinalysis.** For microhematuria;
3. **Lung Function Testing and Chest X-ray Films (Posteroanterior and Lateral).** To examine for pulmonary obstruction;
4. **Complete Blood Count With Differential.**
5. **Stool Hemoccult.** The Smith/Kline testing kit was recommended for standardization of screening results. Instructions were provided for a 7-day prescreening diet to improve reliability of the self-administered specimen collection.
6. **Sigmoidoscopy.** Flexible fiberoptic sigmoidoscopic examination of the sigmoid and descending colon (up to 65 cm) after adherence to a special diet and following the intake of two Dulcolax tablets by the subject the previous evening and administration of a 4½ ounce Fleet's enema at the clinical location.

Participating physicians were identified by the Workers' Institute. Contractual relationships were finalized by union representatives, who also administered the program locally. The physicians were selected on the basis of the following criteria:

1. The physicians had the necessary specialized training, equipment, facilities, and experience, particularly in the use of flexible sigmoidoscopic procedures.
2. The physicians were interested in the conduct of large-scale cancer control programs in occupational high-risk groups, with appreciation for the research aims that were involved. They also displayed a willingness to conduct education sessions for groups of subjects in advance of the screening clinic.
3. The physicians' costs were competitive.

Port Allegany

The Port Allegany program was developed despite poor detection and prognosis potential for lung cancer. Experiments in lung cancer detection, either by x-ray film or sputum cytology, to date, have not yielded reduced mortality rates, although some improvement in survival rates has been suggested.[17-19] The lack of effect

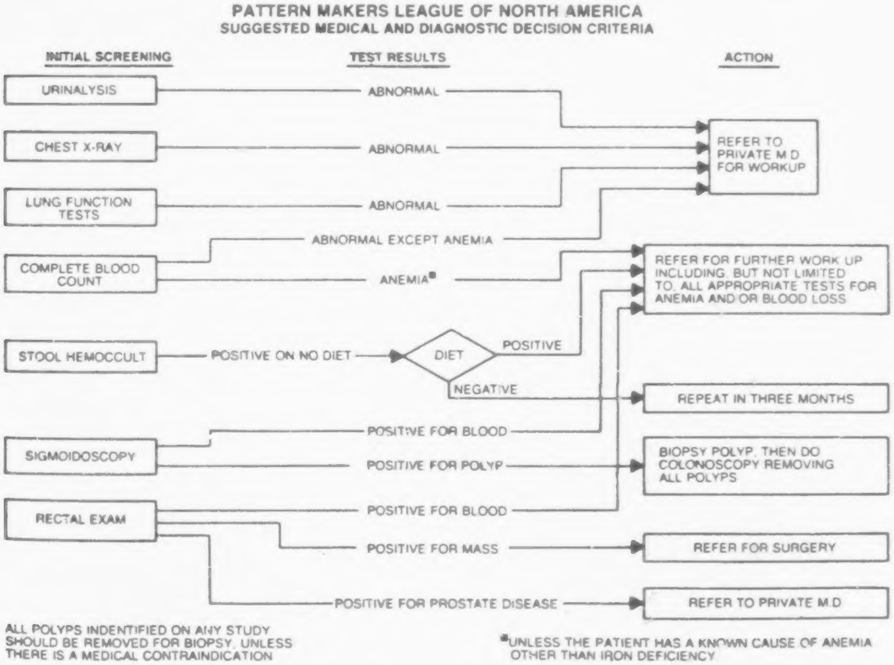
PATTERN MAKERS LEAGUE OF NORTH AMERICA
SUGGESTED MEDICAL AND DIAGNOSTIC DECISION CRITERIA
INITIAL SCREENING
TEST RESULTS
ACTION
URINALYSIS
ABNORMAL
CHEST X-RAY
ABNORMAL
LUNG FUNCTION TESTS
ABNORMAL
REFER TO PRIVATE M.D. FOR WORKUP
COMPLETE BLOOD COUNT
ABNORMAL EXCEPT ANEMIA
ANEMIA*
REFER FOR FURTHER WORK UP INCLUDING, BUT NOT LIMITED TO, ALL APPROPRIATE TESTS FOR ANEMIA AND/OR BLOOD LOSS
STOOL HEMOCCULT
POSITIVE ON NO DIET
DIET
POSITIVE
NEGATIVE
REPEAT IN THREE MONTHS
SIGMOIDOSCOPY
POSITIVE FOR BLOOD
POSITIVE FOR POLYP
BIOPSY POLYP, THEN DO COLONOSCOPY REMOVING ALL POLYPS
RECTAL EXAM
POSITIVE FOR BLOOD
POSITIVE FOR MASS
REFER FOR SURGERY
POSITIVE FOR PROSTATE DISEASE
REFER TO PRIVATE M.D.
ALL POLYPS INDENTIFIED ON ANY STUDY SHOULD BE REMOVED FOR BIOPSY, UNLESS THERE IS A MEDICAL CONTRAINDICATION
*UNLESS THE PATIENT HAS A KNOWN CAUSE OF ANEMIA OTHER THAN IRON DEFICIENCY

Figure. Pattern Makers' League of North America: suggested medical and diagnostic decision criteria.

has also been reported for occupational high-risk groups.[50,51] In addition to screening, the Port Allegany project has placed major emphasis on smoking cessation education and control of superimposed respiratory infections in persons with reduced lung capacity due to pulmonary obstruction.

Initial examinations were provided to program participants by physicians from the Mt Sinai School of Medicine, New York City. The screening protocol included:

1. **Physical Examination.** Emphasis on chest and gastrointestinal symptoms and included oral and pharyngeal examination;
2. **Chest X-ray Examination (Posteroanterior and Lateral);**
3. **Hematocrit;**
4. **Stool Hemoccult** (Smith/Kline);
5. **Urinalysis;**
6. **Lung Function Testing.** To determine the degree of pulmonary obstruction;
7. **Induced Sputum-Production for Cytology.** To identify cell transformation indicative of neoplastic development.

After the initial examination, participants were assigned to categories with recommendations for the type and frequency of continued surveillance (Table 2). The decision criteria for protocol category placement included ascertainment of the participant's exposure history, smoking status, and medical findings.

Continued surveillance testing is provided by local physicians under contract, and nonnegative findings result in referrals to specialists in the area according to customary referral patterns.

Program Evaluation Parameters

To date, evaluation has been limited to process indicators for a variety of program considerations. This report focuses on the following parameters:

Participation Rates. The primary evaluation measurement of project impact is participation rate in the medial intervention programs. Participation rate was defined as the number of participants, expressed as a percentage of identified eligible program participants who had been located and notified.

Compliance Rates. To evaluate the extent to which the educational messages penetrated the target populations, rates of compliance with key program components were evaluated: (1) ***Augusta***: participation in diagnostic follow-up evaluation requiring cystoscopy; (2) ***Pattern makers***: compliance with the 7-day special diet for stool guaiac specimen collection required prior to screening; (3) *Port Allegany*: smoking cessation rates.

Additionally, this report will summarize some of the preliminary medical findings from these projects. Other reports are being prepared to give details, and some of these are presented in this symposium publication.

Results

These projects were in the implementation phase from 1980 until 1984. Presented below are results from the first rounds of the screening programs.

Participation Rates

In the Augusta project, at the time of notification (1981), 1,094 members of the cohort were believed to be alive with approximately 75% living within a 50-mile radius of Augusta. After repeated mailings, however, no more than 849 could be found. Of those, 611 cohort members were located within the Augusta catchment area (within 50 miles of the city) with 238 designated as "out-of-towners." Of those identified, 93% of the Augusta residents and 77% of the out-of-towners have participated, for an overall participation rate of 88% (Table 3).

TABLE 2

Port Allegany Project Surveillance Protocol[illegible]

	Chest Examination and Symptom Review	Gastrointestinal Symptoms Review	Chest X-ray Film	Spirometry	Sputum Cytology	Stool Hemocult	Hematocrit and Urine
	Frequency of Procedure in No. of Months						
Never Smoked							
Less than 20 yr from onset of asbestos exposure	12	—	12	12	—	—	—
More than 20 yr from onset of asbestos exposure	12	12	12	12	12	6	6
Smokers and Ex-smokers							
Less than 15 yr from onset of asbestos exposure	12	—	12	12	12	—	—
15–20 yr from onset of asbestos exposure	12	—	12	12	6	—	—
More than 20 yr from onset of asbestos exposure	12	12	4	12	4	4	4

TABLE 3
Augusta Project Notification and Participation Rates

Total No. in cohort	1,385		
No. assumed decreased prior to notification	272 (20%)		
No. with no address available	19 (1%)		
No. lost to follow-up*	245 (18%)		
No. assumed alive and notified	849 (61%)		
Geographic Distribution	**In Area**	**Out of Area**	**Total**
No. assumed to be notified	611	238	849
No. participating (% of those notified)	566 (93%)	136 (77%)	749 (88%)

* Notification letters returned as undeliverable

The success in terms of achieving the participation goal is tempered by the high number of workers lost to follow-up: 187 members of the cohort believed to be located in the Augusta catchment area and another 58 likely out-of-towners were unaccounted for, in spite of intensively tracking addresses through available population registries. Thus, of the defined assumed eligible population of 1,094, a total of 245 or 22.5% were lost to follow-up, which should be considered unsatisfactory.

For the pattern makers, data from select locations where the first baseline medical screenings were performed are presented in Table 4. After union negotiations, the workers received tests through their employers and/or at clinics organized under contract with the union. The clinic programs were paid for through employer/union insurance funds. Although these workers obtained free tests, the majority of them (87%) typically had to take the tests on their own time, and at a central location which in some cases meant extra travel. Offsetting these costs and inconveniences was the "seal of approval" provided to the program by having been organized and controlled by the union (Table 4).

The screening programs got underway at the end of 1981, and the first were completed in late 1982. Participation rates were disappointing in that an average of 48% of the union's members completed the screening program. This result may be accounted for, at least in part, by the economic depression that hit this industry and was particularly severe in 1982. In December of 1980, the unemployment rate among the union's members was 3%. In December 1981, 26% were unemployed, and by December 1982, a staggering 53% of the members were out of work. Many unemployed pattern makers became ineligible for the medical coverage that supported this program.

In Port Allegany, the medical program was offered in 1978, 1979, and 1981 by field medical teams from Mt Sinai School of Medicine, New York City. By mid-1982, medical services became offered by specially trained community physicians in the Port Allegany area. As can be seen from Table 5, notification rates are similar to those obtained in Augusta, with 854 members of the cohort located and notified. Of those notified, 80% of those living in the Port Allegany catchment area (within 30 miles of the town) have participated. Of those outside the catchment area, 46% have also participated, for an overall participation rate of 70%. What characterizes the Port Allegany program at this time is a well-structured and organized approach that is likely to lead to increased participation, particularly as the program focuses its attention on the population outside the catchment area.

Compliance

Of 566 workers from the Augusta catchment area who had completed the primary screening during the first year, 374 were referred for follow-up urological diagnosis with cystoscopy. By 1984, 273 of the referred workers had completed the second stage, for a compliance rate of 73%. However, to achieve this result, a massive outreach campaign was required, which probably went beyond the level of effort that could reasonably be expected if such projects were routine.

For pattern makers, the major compliance indicator was adherence to the special diet during a 7-day period prior to the medical screening. An overall compliance rate of 94% was self-reported by participants in the

TABLE 4
Pattern Makers Project: Preliminary Participation Rates, Select Locations

Clinic	Eligible Population	No. of Participants	Participation Rate	Cancer*	Polyps
Battle Creek, MI	35	20	57%	0	0
Creston, IA	14	14	100%	0	2
Columbus, OH	35	17	49%	1	1
Detroit, MI	603	320	53%	2	59
Ford-Cleveland, OH	143	90	63%	1	15
Ford-Detroit, MI	218	109	50%	0	6
Grand Rapids, MI	63	50	79%	1	4
Indianapolis, IN	103	28	27%	0	10
Los Angeles, CA	124	41	33%	0	3
Lansing, MI	12	3	25%	0	1
Milwaukee, WI	325	175	54%	0	36
Saginaw, MI	108	52	48%	0	8
South Bend, IN	148	40	27%	0	1
St Paul, MN	48	29	61%	1	4
Toledo, OH	68	24	35%	0	0
Warren, MI	1,084	501	46%	6	69
Total	**3,131**	**1,513**	**48%†**	**12**	**219**

* Pathology includes cancer, carcinoma-in-situ and carcinoid
† Average participation rate

TABLE 5
Port Allegany Project Notification and Participation Rates

Total no. in cohort	1,186		
No. assumed deceased prior to notification	100 (8%)		
No. with no address available	232 (20%)		
No. alive and notified	854 (72%)		
Geographic Distribution	**In Area**	**Out of Area**	**Total**
No. notified	597	257	854
No. participating (% of those notified)	475 (80%)	119 (46%)	594 (70%)

select locations that first completed the screening process (Table 6). These remarkable data have generally been confirmed by the examining physicians, as well as by a recent analysis of results from the stool guaiac testing. However, results warrant further confirmation, and place in question the validity of this indicator as a sensitive evaluation parameter for compliance (Table 6).

In Port Allegany, smoking cessation was identified as a key compliance indicator. All data collected were self-reported. Smoking status was ascertained for each program participant during the initial screening. Of 355 workers examined in 1979, 35% indicated they were current smokers, and 43% indicated they were ex-smokers. To what extent this was influenced by previous publicity about asbestos hazards at the plant, which began in the local newspapers in the late 1960s, is unknown and needs to be investigated.

During reexamination of the workers (n = 179) by local physicians during the period 1982 to 1983, smoking status information was again collected. These data would indicate that 30% of the participants in the program continue to smoke—a smoking prevalence somewhat below the rate of smoking in the general blue-collar US population.[22]

A telephone interview survey conducted in 1984 (among participants and nonparticipants) obtained comparable results. This indicates a smoking prevalence among randomly selected participants in the Port Allegany Asbestos Program (N = 206) of 30%. Among nonparticipating cohort members (n = 92), 47% report that they are current smokers. Of greater interest, perhaps, are responses from ex-smokers (n = 96) who were asked: "Did contact with asbestos cause you to stop smoking?" Twenty-five percent said "yes." These self-reported data are being reexamined and evaluated.

Medical Findings

Results in these cohorts have been summarized for the target sites of cancer where a definitive diagnosis existed.

In the Augusta cohort, a total of 15 cases of bladder cancer have been confirmed. Three of these cases were ascertained from death certificates. Seven cases were found to have been diagnosed among living cohort members prior to the start-up of this program. So far, a total of five cases have been identified as a result of the screening program. In addition, about 22 cohort members have been identified to have nonnegative cytology results or positive nuclear fluorescence results, and these have been placed in a special risk category.

Among pattern makers, a total of 12 cases of malignant disease of the large bowel and rectum have been confirmed to date among the 1,513 subjects who have completed the examination (Table 4). Also as a result of the screening, 219 pattern makers were found to have colorectal polyps, placing them in a special risk category for future monitoring.

In Port Allegany, the earliest exposure appears to have occurred in 1964. With a latency period of 20 years, the earliest cancer cases are just beginning to present themselves, with the first case of lung cancer detected through the program in 1983. Case findings will continue.

TABLE 6
Pattern Makers Project: Special Diet Compliance: Select Locations

Clinic	No. Examined	No. Complied	Compliance Rate
Battle Creek, MI	20	14	70%
Creston, IA	14	14	100%
Columbus, OH	17	17	100%
Detroit, MI	320	295	92%
Ford-Cleveland, OH	90	90	100%
Ford-Detroit, MI	109	105	96%
Grand Rapids, MI	50	50	100%
Indianapolis, IN	28	24	86%
Los Angeles, CA	41	40	98%
Lansing, MI	3	3	100%
Milwaukee, WI	175	173	99%
Saginaw, MI	52	48	92%
South Bend, IN	40	40	100%
St Paul, MN	29	27	93%
Toledo, OH	24	23	96%
Warren, MI	501	463	92%
Total	**1,513**	**1,426**	**94%***

* Average compliance rate

Discussion

The year 1982 brought the worst recession that this nation has seen since the 1930s. In the basic manufacturing industries, this recession became a serious economic depression. Thus, 1982 was a bad year to implement large-scale cancer control programs for industrial workers. Although subject to further analysis, this economic factor helps to explain the unsatisfactory participation rates among pattern makers—an occupation severely hurt by unemployment.

The high rate of participants lost to follow-up seen in Augusta and Port Allegany is another problem that warrants further investigation. It appears that most population registries and data files (including the Social Security Administration and state motor vehicle agencies) do not adequately encompass transient populations of low to medium income. The Augusta project does, however, demonstrate the feasibility of establishing intervention programs under the worst of circumstances, that is, in a community highly polarized by racial discrimination, poverty, and substantial lack of understanding of toxic hazards.

Smoking cessation in the Port Allegany population is interesting and should be investigated further. The self-reported results that knowledge about asbestos exposure led to substantial smoking cessation might indicate that under certain circumstances the act of notification by itself leads to significant changes in health-seeking behavior. At this time, we do not have data on the impact of the strong personal counseling given by the examining physicians to each clinic participant about the importance of smoking cessation. Therefore, the role of the physician as health counselor in programs directed at blue-collar workers needs careful evaluation in order to confirm the existing literature that suggests that health professionals through individual counseling may be among the most effective intervenors for so-called "life-style" health risks.[23,24]

The identification of subjects with medical findings indicative of higher risk (eg, nonnegative urinary cytology findings or the presence of colorectal polyps) raises the need for vigorous monitoring, and the potential for additional cancer control measures. In effect, such findings indicate the identification of high-risk *individuals* within high-risk groups. As new cell differentiation methods and biological markers of disease and exposure become available (eg, cell surface antigens), it should become possible to identify high-risk individuals with greater accuracy.

In summary, these demonstration projects show that a great deal of etiological and basic biomedical knowledge can be derived from intervention demonstration projects. In the future, when practical, interventions should include research components. Occupational high-risk groups are unique in this regard for two reasons. First, from industrial hygiene evaluations and previous epidemiological research, a great deal is known about the anticipated dose-response relationship in the population at risk. Therefore, these cohorts allow for the study of highly targeted intervention approaches. Second, because the age and time of onset of exposure are known from personnel and union records, it is possible to conduct research on the efficacy of different intervention methods at different stages of carcinogenesis in the population. As a result, occupational high-risk groups offer opportunities not only to evaluate intervention methods, but also to better understand human carcinogenesis and its control in general.

Conclusions

The three programs reported here demonstrate that notification and intervention programs for high-risk occupational cohorts are feasible within the existing structures of labor-management relations, medical care delivery and community services, and social networks. They also demonstrate that much remains to be learned about our responses to risks carrying relatively low probabilities and chronic disease outcomes with lengthy latency periods.

Addendum

Several reports have been prepared recently that relate to other aspects of this program. On the underlying reasoning, see Samuels.[4,5] On the public health issues surrounding notification, see Schulte and Ringen,[3] and on criteria for notification of workers at high risk, see Schulte.[25] On the social and legal implications, see Ringen and Smith.[26] For risk assessments and for a detailed evaluation of the impact of notification in Augusta, see Schulte et al.[27,28] For a risk assessment of colon cancer in pattern makers based on the screening program reported here, see Hoar et al (this volume). The results of specific screening tests used in some of these projects are discussed in Bang et al (this volume) for colon cancer, and Hemstreet et al (this volume) for bladder cancer. For a discussion of economic considerations arising from these projects, see Ruttenberg and Powers (this volume).

Acknowledgment

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The Traveler's Home

. . . Sometimes a legend can provide the key to identity. The original Wandering Jew was a cobbler who had a store some 2,000 years ago on Jerusalem's Via Dolorosa. The Friday of the Crucifixion, he watched along with everyone else as Jesus dragged the cross up the long street to Calvary. It was his misfortune, perhaps, that Jesus asked to rest against his storefront. The cobbler refused, so Jesus condemned him to eternal wandering with never a place to rest.

The story is Christian, of course, not Jewish, and has served for centuries as a focus for anti-Semitism. . . .

Sometimes it seems that I have incorporated the legend of the Wandering Jew, as though I am fated never to find simple content as generations have done in this house on Puget Sound, never to settle down in the simple assurance that this is my place, where I belong.

. . . I am due to go back to New York in a few days. That will be my base for now but not my home; it lacks the intimacy of home. It will be hard to leave a place as beautiful as this house on the water, but then, I've discovered that a Wandering Jew never does leave. Not really. Home is not a house but a sense of place and state of mind, so that the places I love travel with me, in my mind, wherever I go. And I come back to them again and again like a migratory bird to its nest, renewing the intimacy.

Perhaps the real irony is that those who invented the legend of the Wandering Jew never imagined that it could be not only a burden but also a blessing. The landscapes of my life are scattered around the world, true, but wherever I find the sense of place, the place becomes part of me, and I part of it. If I am poor in permanence, I am rich in intimacy. That is the choice I make. For the time being.

—From "Hers" by Lesley Hazleton in *The New York Times*, May 29, 1986.

Screening for Colorectal Cancer and Polyps Among Pattern Makers

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In response to a union request, a cancer screening program was conducted for the Pattern Makers' League of North America. Ten colon cancer cases were detected among the 1,465 white men screened with a flexible sigmoidoscope. The difficulties in obtaining appropriate "expected" numbers were that (1) prevalent detectable preclinical colon cancer is not equivalent to incident disease, and (2) the flexible sigmoidoscope yields results not directly comparable to those of the rigid sigmoidoscope used previously. The "expected" number of cancers was obtained by using an independent estimate of 5 years for the mean duration of the detectable preclinical phase. This implied that the expected number of colon cancer cases should be based on the age-specific incident rates among white men in the next-older 5-year age group and that the annual expected number should be multiplied by five. Therefore, the ten observed cases of colon malignancies represented an approximately threefold increase. For invasive cancer only, there was a slightly less than twofold cancer increase. Fifteen percent of the men had one or more colorectal polyps.

Pattern makers construct prototypes for mass-produced items such as automobiles and agricultural implements. Pattern makers can be exposed to wood, metals, fiberglass, plastics, epoxy resins, welding or soldering fumes, cutting oils, solvents, and spray paints. Concern over ill-health effects from these exposures arose in 1978 when a General Motors (GM) pattern maker notified the Pattern Makers' League of North America (PML) about an apparent excess of cancer deaths among his fellow workers. Three partially overlapping epidemiological studies investigated the cancer risks of pattern makers. Excess colorectal cancer was reported in each study.

The Michigan Cancer Foundation (MCF) identified 1,070 white male pattern makers employed in seven GM automobile manufacturing plants in metropolitan Detroit as of Jan 1, 1970, and determined their cancer incidence until Dec 31, 1978.[1] Eleven cases of colorectal cancer were observed where, based on the MCF cancer registry's incidence rates for white men in metropolitan Detroit, only 3.8 were expected.

The Memorial Sloan-Kettering Cancer Center studied 1,623 pattern makers employed in 14 GM plants nationwide, including the 7 Detroit plants studied by the MCF (D. Schottenfeld, M. E. Warschauer, and A. G. Zauber, unpublished data, April 1980). The subjects worked for GM as pattern makers at any time from Jan 1, 1970, through Dec 1, 1979. Using sickness and accident claims and the MCF cancer registry incidence data, 14 cases of colorectal cancer were observed compared with 5.9 expected. Colorectal cancer mortality rates among pattern makers were also elevated based on the U.S. general population (2 observed, 0.6 expected).

In 1980, a proportional mortality study of 1,257 deceased white men who were eligible for death benefits from the PML was reported.[2] Compared with the US general population, the union members experienced a 67% excess proportion of deaths due to colon cancer (43 observed, 25.7 expected).

Because of these repeated findings of excessive cancer among pattern makers, GM instituted a cancer screening program (V. M. Hawthorne and C. A. Megaro, unpublished data, November 1981). During 1980 and 1981, 5,007 employees, consisting of approximately 20% pattern makers and ex-pattern makers and 80% other employees, were examined. Nine invasive and three in

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situ colorectal cancers were newly diagnosed; 3.1 cases were expected, based on incidence rates for Detroit.

In 1981, the PML arranged for the Workers' Institute for Safety and Health to conduct a cancer screening and educational program for the league members who worked as independent "job shoppers" or who worked for corporations other than GM. This paper presents preliminary results from this screening program, focusing on the prevalence of colorectal polyps and cancer.

Methods

The cancer screening program consisted of educational programs and recruitment during league business meetings, medical examinations, and self-administered questionnaires, called CANSCREEN, developed by the Institute for Cancer Research.[3] The medical examinations included flexible fiberoptic sigmoidoscopy, fecal occult blood testing, digital rectal examination, complete blood count and differential, urinalysis, chest x-ray film, pulmonary function tests, and a limited physical examination. Persons with abnormal results were referred to their private physicians for further diagnosis and medical treatment.

The questionnaire collected information on sex, age, race, marital status, education, cancer symptoms, respiratory function, medical history, and diet. The questionnaire also requested an occupational history: the date of initiation into the PML, dates of lapses in league membership, and the dates, position titles, and league association for all pattern-making and apprenticeship jobs. Similar information was requested for non-pattern-making jobs. Crude occupational exposure information was obtained on the primary material for each job: wood, metal, plastic, plastic and wood, or other. Only one answer per job for the primary exposure was allowed. Note, therefore, that the recorded years of primary exposure to wood, for example, would be less than the total years of exposure to wood.

Results

As of December 1983, 1,513 men had participated in the cancer screening program. The men were primarily from Detroit and other industrial areas of the Midwest. Table 1 shows the distribution by race and type of sigmoidoscope. The flexible sigmoidoscope was used in 15 clinics, but the rigid sigmoidoscope was used in one clinic because the physicians there were not qualified to use the flexible sigmoidoscope.

Among the 1,465 white men examined with a flexible sigmoidoscope (average insertion of 52 cm), 227 (15%) had one or more polypoid lesions, totaling 317 lesions. Table 2 shows the number of lesions per pattern maker. Fifty-five (24%) of the pattern makers with lesions had multiple polyps.

The pathology of the largest lesion per pattern maker is presented in Table 3. The data are a mix of observations by the physicians performing the sigmoidoscopies and diagnoses from pathology reports on excised tissues. The percentage of lesions classified as "Polyp, not otherwise specified, and other" is larger in this series than in most of the reports from clinics because the private physicians did not always return the final pathological diagnosis to the screening program. Excluding the polyps with unspecified or unknown pathology, the proportion of adenomatous polyps (34%) appeared to be smaller than in the series reported by Lipshutz et al (75%),[4] Meyer et al (53%),[5] and Rosevelt and Frankl (60%).[6] The pattern makers had a greater proportion of hyperplastic polyps (54%) than reported by Lipshutz et al (16%)[4] and Rosevelt and Frankl (21%).[6]

The distances from the anal verge for up to four polypoid lesions per pattern maker are shown in Table 4. Rigid sigmoidoscopy, which allows visualization of approximately 20 cm of the colorectum, would have failed to detect 55% of the cancers and 46% of the polyps detected by flexible sigmoidoscopy.

Almost half of the lesions detected were less than 0.5 cm in diameter (Table 5). There was no association between age at examination and the proportion of le-

TABLE 1
Number of Pattern Makers Participating in Cancer Screening Program by Race and Type of Sigmoidoscope

Race	Type of Sigmoidoscope			No. of Pattern Makers
	Flexible	Rigid	Unknown	
White	1,465	23	16	1,504
Nonwhite	8	1	0	9
Total	**1,473**	**24**	**16**	**1,513**

TABLE 2
Number of Polypoid Lesions per Person among White Male Pattern Makers Screened by Flexible Sigmoidoscopy

No. of Lesions Per Person	No. of Pattern Makers
1	172
2	37
3	11
4 or more	7
Total	**227**

TABLE 3
Pathology of Largest Polypoid Lesion per White Male Pattern Maker*

Pathology of Lesion	Cancer	Polyps	No. of Lesions
Sessile adenomatous polyp	1	8	9 (4%)
Pedunculated adenomatous polyp	0	8	8 (4%)
Adenomatous polyp, not otherwise specified	2	24	26 (11%)
Villous adenoma	1	7	8 (4%)
Hyperplastic polyp	1	63	64 (28%)
Inflammatory polyp	0	7	7 (3%)
Polyp not otherwise specified and other	2	66	68 (30%)
Cancer	2	0	2 (1%)
Unknown	2	33	35 (15%)
Total	**11**	**216**	**227**

* Based on observations by sigmoidoscopists and diagnoses from pathology reports of excised tissues.

TABLE 4

Distance from Anal Verge of up to Four Polypoid Lesions per Person among White Male Pattern Makers Screened by Flexible Sigmoidoscopy

Distance (cm)	Cancer	Polyps	No. of Lesions
≤10 cm	3	37	40 (13%)
11–20 cm	2	115	117 (38%)
21–30 cm	6	87	93 (30%)
31–40 cm	0	39	39 (13%)
41–50 cm	0	9	9 (3%)
51–60 cm	0	4	4 (1%)
Unknown	1	4	5 (2%)
Total	**12**	**295**	**307**

TABLE 5

Number of White Male Pattern Makers Screened by Flexible Sigmoidoscopy by Diameter of Lesions

Diameter (cm)	Cancer	Polyps	No. of Lesions
<0.5 cm	2	108	110 (48%)
0.5–0.9 cm	3	53	56 (25%)
1.0–1.9 cm	2	42	44 (19%)
≥2 cm	3	6	9 (4%)
Unknown	1	7	8 (4%)
Total	**11**	**216**	**227**

TABLE 6

Number and Percent of White Male Pattern Makers Screened by Flexible Sigmoidoscopy with Polypoid Lesions by Diameter of Lesion and by Age

Age (yr)	Screened	Lesions, Any Size	Lesions, ≥0.5 cm
<40	595	49 (8%)	17 (3%)
40–49	335	41 (12%)	23 (7%)
50–59	340	83 (24%)	40 (12%)
60–69	187	52 (28%)	29 (16%)
70–74	7	2 (29%)	0 (0%)
Total	1,464*	227 (16%)	109 (7%)

* One pattern maker was of unknown age

sions smaller than 0.5 cm; approximately half of the polyps at every age group under 70 years were smaller than 0.5 cm (Table 6).

Little information has been published on the age-specific prevalence of polyps in asymptomatic populations, as determined by flexible sigmoidoscopy. Most available data relate to symptomatic populations or to examinations done with the rigid sigmoidoscope. Also, many sigmoidoscopists disregard lesions less than 0.5 cm in diameter. Table 7 displays prevalence data from four studies of asymptomatic populations examined with flexible sigmoidoscopes.[4-7] Although age-specific data from these populations were not always published, the proportion of persons with polyps was similar to that seen among pattern makers. In the group 40 years of age and older, the proportion of pattern makers with polyps greater than 0.5 cm was 11% v 10%, 10%, 13%, and 14% in the other populations.

There have been two previously published reports on screening programs among patternmakers.[8,9] One report included some subjects who are also in the present study population.[8] Demers et al[8] reported an overall prevalence rate for polyps of 17% among 802 pattern and model makers. The prevalence rate for polyps greater than 0.5 cm in diameter among the men aged 40 years and older was 12%, which is similar to the present study's estimate of 11% and those in the four comparison populations cited earlier. Ibrahim's[9] reported 44 polyps among 409 pattern makers aged 20 years and older, yielding a prevalence rate of 11%. No further information on age or polyp size was available.

The prevalence of polyps according to employment characteristics was also examined. An apparent association with years of employment as a pattern maker reflected the association of polyps with age (Table 8). The prevalence of polyps did not vary significantly according to any primary exposure to wood (139 or 15%), metal (140 or 14%), plastic (116 or 14%), or other materials (37 or 19%). Neither did analyses of years of primary exposure reveal any association with prevalence of polyps. There was no significant variation in prevalence according to work as an independent job shopper or as a corporate employee nor according to PML district. Active employees (14%) had slightly lower prevalence of polyps than inactive (30%), retired (20%), and other workers (45%), but these slight differences by employment status probably reflected age distribution differences and the instability of the small numbers of nonactive workers screened.

The screening program detected one rectal cancer and ten colon malignancies (six adenocarcinomas, two carcinomas in situ, two carcinoid tumors) among white males. In addition, one black man was diagnosed with a colon cancer. It is difficult to determine the number of cancers that might be expected among the pattern makers because prevalent detectable preclinical colorectal cancer is not equivalent to symptomatic incident disease, which is the basis for published cancer rates. A screening program in an asymptomatic population detects cancer earlier in calendar time than the traditional medical care system. This means that the first round of a screening program will "harvest" several years of cases. Data from two rounds of screening at GM provided some estimates of the number of years "harvested" in the first round of its cancer screening program (J. Waterbor and P. Cole, unpublished data, 1983). Using the formula Prevalence = Incidence × Duration, Round 1 prevalence data, and Round 2 incidence data, GM's best estimate for the mean duration of the detectable preclinical phase was 5.0 years (range: 3.8–6.8). Another estimate based on the screening data and information on growth rates and doubling time of neoplasia was remarkably similar at 4.3 years.[10] Therefore, the expected number of cancers was estimated using the following calculations:

1. Multiply the number of people screened in each 5-year age group by the cancer incidence rates for the next older 5-year age group of Detroit white males.[11] The screening program detected cases that otherwise would have been diagnosed in 5 years' time.

2. Multiply the "annual" expected number from step 1 and 5. Round 1 of the screening program "harvests" 5 years of cases.

Using these assumptions, the one rectal cancer ob-

TABLE 7

Results from the Pattern Makers and Four Other Asymptomatic Populations Screened with Flexible Sigmoidoscope

Reference No.	Screened	Age (yr)	Diameter	Polyps	Comments
	1,465 men	≥20	All	227 (15%)	73% <1.0 cm
			≥0.5 cm	109 (7%)	
	869 men	≥40	All	178 (20%)	
			≥0.5 cm	92 (11%)	
4	198 men	≥40	All	39 (20%)	
	2 women		≥0.5 cm		
6[a]	315 men	40–69	≥0.4 cm	31 (10%)	
7	316 men	≥50	All	44 (14%)	68% <1.0 cm
5	96 men	≥40	All	16 (13%)	17% <1.0 cm
	26 women				

[a] Sex-specific data on the population described by Rosevelt and Frank[6] were provided by personal communication in Demers et al.[7]

TABLE 8

Number and Prevalence Rate of Polyps Among White Men Screened by Flexible Sigmoidoscopy by Years of Employment as a Pattern Maker and by Age

Years of Pattern Making	Age (yr)[a]					
	<40	40–49	50–59	60–69	70–74	Total
1–10	11 (4%)	3 (19%)	5 (38%)	1 (20%)	0 (0%)	20 (6%)
11–20	24 (10%)	8 (8%)	3 (14%)	2 (25%)	0 (0%)	37 (10%)
21–30	8 (25%)	24 (13%)	28 (27%)	3 (14%)	1 (100%)	64 (19%)
31–40	0 (0%)	4 (15%)	24 (15%)	12 (27%)	0 (0%)	40 (17%)
41 and older	0 (0%)	0 (0%)	7 (28%)	27 (28%)	0 (0%)	34 (27%)
Unknown	5 (19%)	1 (9%)	8 (42%)	6 (50%)	1 (100%)	21 (30%)
Total	**48 (8%)**	**40 (12%)**	**75 (22%)**	**51 (27%)**	**2 (29%)**	**216 (15%)**

[a] One pattern maker was of unknown age.

served (O) was compared to 2.3 (E):

$$O/E = 0.4;\ 95\%\ \text{confidence interval (CI)} = 0.01,\ 2.5$$

Ten colon cancers were observed, with 3.9 expected, yielding an O/E ratio of 2.6 (95% CI = 1.2, 4.7). The eight invasive cancers observed were compared to 3.8 expected:

$$O/E = 2.1;\ 95\%\ \text{CI} = 0.9,\ 4.2$$

Two in situ cases were observed with only 0.1 expected. The O/E colon cancer ratios for 1 to 10, 11 to 20, 21 to 30, 31 to 40, and more than 41 years of employment as a pattern maker were 1/0.2, 3/0.4, 2/0.9, 3/1.1, and 0/1.1, respectively. One colon cancer patient had unknown years of employment as a pattern maker. Also examined was risk according to occupational exposures, employer type, employment status, and district. Small numbers limited the meaningfulness of these detailed analyses, however.

Discussion

Among the 1,465 white male pattern makers examined with a flexible sigmoidoscope, 227 (15%) had one or more colorectal polyps or cancer. No lesions were detected by examination with the rigid sigmoidoscope. No evidence suggested that the overall crude prevalence of polyps was excessive in comparison with four other asymptomatic populations screened by flexible sigmoidoscopy. Also, polyps were not associated with any characteristic of employment as a pattern maker for the available data. There was a 2.6-fold increase in colon cancer, based on conservatively adjusted estimates of expected numbers. The colon cancer excess was of approximately the same magnitude as that found in the other studies of pattern makers[1] (D. Schottenbeld, M. E. Warschauer, and A. G. Zauber, unpublished data, 1980; C. A. Megaro and V. M. Hawthorne, unpublished data, 1981). The number of cancer cases was too small to determine the role of occupational factors.

The data have several limitations to consider. First, the procedures used to estimate the mean duration of the preclinical phase and the expected number of colon cancers may be inappropriate. If, however, we use the upper end of GM's estimated range of the mean duration of the detectable preclinical phase, 6.8 years, we still calculate an almost twofold excess of cancer. It is interesting to note that the estimate based on doubling time, 4.3 years, was closer to the lower end of the range for GM's estimate, which would yield more than a threefold excess.

Second, the number of pattern makers screened was small, yielding too few polyps and cancer cases for detailed occupational analyses to identify potential high-risk subgroups.

Third, the questions on job exposures lacked sufficient detail to clearly distinguish exposure differences among pattern makers. Only one exposure per job, the primary exposure, was recorded. The years of primary exposure to a substance are a subset of the years of total exposure. For example, a pattern maker could have been exposed to wood in five jobs for a total of 30 years, but recorded wood as the primary exposure in only three jobs for 15 years. The National Cancer Institute and the Workers Institute for Safety and Health have developed a new questionnaire with detailed occupational exposure items that can be used in future rounds of screening or for nested case-control studies within the pattern maker cohort.

Fourth, the variation in exposures among pattern makers may be small, making it impossible to detect excess risk for specific subgroups using this study design. All pattern makers may have a similar complex mix of exposures. To counter this problem, one would need to compare pattern makers with some other occupational group.

Nonoccupational factors related to colorectal polyps and cancer, such as ethnicity, socioeconomic status, or diet, may be confounding the data, masking a real association between pattern making and polyps or creating a questionable colon cancer excess. We plan to analyze the crude dietary data from the questionnaire to investigate this possibility.

Finally, a greater proportion of pattern makers with colon cancer may have decided to participate in the screening program than pattern makers with polyps or pattern makers without any gastrointestinal disease, causing a bias in the results. However, all men were supposedly asymptomatic.

In summary, this report confirms several others stating that pattern makers appear to be at an approximately twofold to threefold increased risk for colon cancer. Exposure data are insufficient to link colon cancer excess to any specific characteristic of pattern making. These data provide no evidence that pattern makers have excess colorectal polyps, but more information is needed on the size- and age-specific prevalence rate of polyps in the general population as detectable with flexible sigmoidoscopy.

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Sensitivity of Fecal Hemoccult Testing and Flexible Sigmoidoscopy for Colorectal Cancer Screening

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Fecal Hemoccult testing and flexible sigmoidoscopy have been proposed as means of screening for colorectal cancer in the general population, as well as in identified high-risk groups. A colorectal cancer screening program was conducted for the Pattern Makers' League of North America. A total of 1,473 white males were screened with fecal Hemoccult testing and flexible sigmoidoscopy during the period 1981 to 1983. The fecal Hemoccult test after diet restriction was positive in 38 workers (2.6%). Among 12 colorectal cancers, including in situ cases, only three were positive by this test. The sensitivity of this test for picking up cancer is only 25%. The positive predictive value was 7.9%. It is concluded that the Hemoccult test for the detection of colorectal cancer and polyps is not a valuable tool because of low sensitivity, whereas flexible sigmoidoscopy has a significant role in colorectal cancer screening of an asymptomatic population at risk.

The US annual incidence of colorectal cancer is estimated at approximately 140,000 cases; approximately 60,000 people will die of this disease in 1986.[1] When colorectal cancer is detected and treated early in its asymptomatic stage, the 15-year survival rate is 90%.[2] Unlike many cancers, when detected at an early stage, the cure rate of colorectal cancer can reach 75% or 80%.[3]

In 1980, three epidemiological studies showed a statistically significant twofold increased risk of colorectal cancer in pattern and model makers.[4] (See also unpublished articles by D. Schottenfeld, M. E. Warshauer, A. G. Zauber, et al, 1980.) In response to a request from the Pattern Makers' League of North America (PML), the Workers' Institute for Safety and Health (WISH) conducted a cancer screening program for PML members during the period 1981 to 1983. Pattern makers work primarily in the automobile and agricultural implement industries. They are potentially exposed to wood dusts, metal fumes, cutting oils, solvents, spray paints, and other chemicals. The PML membership consists of approximately 9,700 active workers located in 27 states and three Canadian provinces and includes an additional 2,000 retirees.

Both Hemoccult testing and flexible sigmoidoscopy were performed on the PML members. The Hemoccult test is thought to be sensitive in detecting colorectal cancer. However, in the recent literature, the sensitivity of the Hemoccult test has been reported to be extremely low. In 1976, the 60-cm flexible sigmoidoscopy was introduced and its applicability in the detection of colorectal neoplasia in symptomatic patients is well documented.[5-8] Although the role of flexible sigmoidoscopy in asymptomatic patients has not been well documented, the procedure would seem to be ideally appropriate for the screening of colorectal cancer.

This study served to evaluate the sensitivity and feasibility of both the Hemoccult test and flexible sigmoidoscopy in the detection of colorectal cancer for these asymptomatic high-risk workers.

From the Workers' Institute for Safety and Health, Washington, DC (Dr Bang, Epidemiologist; Ms Tillett, Data Manager; Mr McDougall, Executive Secretary. Dr Bang is now Director for the Epidemiology and Biostatistics Program, Howard University Cancer Center, Washington, DC), and the Environmental Epidemiology Branch, National Cancer Institute (Dr Hoar, Senior Staff Fellow, Occupational Studies Section; Dr Blair, Chief).

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Methods

A total of 1,473 asymptomatic male pattern makers were screened using the fecal Hemoccult test and flexible sigmoidoscopy at 16 clinics during the period 1981 to 1983. The present study subjects were healthy men who volunteered to participate in a cancer screening program after being advised by the union representative that they might be at high risk of colon cancer. The voluntary participants signed the consent form. The consent form contained complete information concerning the goals and requirements for participation. The subjects were asked to have flexible sigmoidoscopy, Hemoccult testing, digital rectal examination, complete blood count with differential, urinalysis, chest X-ray, pulmonary function test, and a limited physical examination. Persons with abnormal findings were referred to their private physician for further diagnostic procedures and necessary medical treatment. Each individual was 20 years of age or older. The participants were predominantly white (99.4%); only two black men were included. All individuals with positive test results from the Hemoccult test or flexible sigmoidoscopy were examined with colonoscopy and/or barium enema for further diagnosis.

Sigmoidoscopy is an instrumental technique for examining the rectum and sigmoid colon. It is used to explore the last 10 to 20 inches of the colon. It may be flexible or rigid. This paper, however, is concerned with flexible sigmoidoscopic examination. Colonoscopy, a long, flexible fiberoptics, permits examination of the entire colon. It is used to obtain information that is beyond the reach of the sigmoidoscope.

WISH collected and edited all medical data from the 16 clinics. The data were computerized and are being analyzed.

Preparation for the Hemoccult test required the participants to eat a special red meat-free diet for three days before preparing the slides. The Hemoccult II slide collection kit (Smith Kline Diagnostic, Sunnyvale, CA) was used. Each participant was required to prepare a set of three Hemoccult slides: one each day for three days prior to the date of the scheduled sigmoidoscopic examination. Each day the participant prepared two smears from different parts of a stool sample: the first smear on window A of the Smith Kline kit and the second on window B. The participants were further advised to keep the slides at room temperature, avoiding heat or fluorescent light. Three Hemoccult slides from each participant were taken for testing by the Hemoccult method. Results were read as positive when a blue color developed within 30 seconds after dilution with two to three drops of a stabilized peroxide solution. The relative intensity of positive reaction was graded as 1+ for one positive slide, 2+ for two positive slides, and 3+ for three positive slides. The slides were not hydrated prior to testing. The Hemoccult slide interpretation was blinded from the sigmoidoscopic examination results. Trace positives or equivocal results were repeated.

The flexible fibroscopic examinations were performed to a maximum of 65 cm. The distance that the flexible sigmoidoscope passed was recorded. Preparation for the sigmoidoscopic examination required the participants to take two Ducolax tablets the previous night. The participants were advised to have light meals and to avoid caffeine products during the day of examination. A Fleet enema, administered just prior to the actual sigmoidoscopic exam, provided adequate bowel cleansing in more than 95% of the participants. The sigmoidoscopic examination was performed by experienced endoscopists who were familiar with the equipment, the identification of lesions, the therapeutic interventions, and the potential complications of the procedure. Insertion of the sigmoidoscope to 50 cm or greater was achieved in 92% of the cases. The average duration of the exam was approximately 8 minutes at one clinic.[illegible] All polyps and suspected malignancies were biopsied at the screening site.

Information from the sigmoidoscopic findings included polyp size, distance of the polyp(s) from the anal verge, type of polyp(s), and other colonic abnormalities present such as colitis and diverticula. Most of the histological/pathological information on the polyps was obtained after referral. Conclusive diagnoses of either cancer, carcinoma in situ, or carcinoid were based on the diagnostic test results and pathological interpretation. The proven cancers, including *in situ* cases, were analyzed for the sensitivity of both the Hemoccult test and the flexible sigmoidoscopy.

Results

A total of 1,473 pattern makers underwent flexible sigmoidoscopy with an average insertion of 52 cm. Eleven of 12 colorectal cancers, identified through colonoscopy and pathological study, were detected by the flexible sigmoidoscopy. The sensitivity of this test was 91.7%, as shown in Table 1. Only one person with cancer was not found to have a polyp by the flexible sigmoidoscopy. That person was referred for colonoscopy and barium enema because of a strong Hemoccult positive. Adenocarcinoma, Duke's classification B, was diagnosed through the pathological examination. Of the 1,473 pattern makers screened with the flexible sigmoidoscopy, 229 (15.5%) were found to have polyps.

The rate of positive Hemoccult tests in 1,473 asymptomatic pattern makers was 2.6% or 38 workers. Of these, three subjects had colon carcinomas. The proportions of Hemoccult positive reactions with 1+, 2+, and 3+ were 44.7%, 23.7%, and 31.6%, respectively.

The sensitivity of the Hemoccult test was 25% (Table

TABLE 1
Sensitivity of Flexible Sigmoidoscopy for Detection of Colorectal Cancer*†

Flexible Sigmoidoscopy	Cancer Present	Cancer Absent
Polyp Present	11	218
Polyp Absent	1	1,243

* Confirmed by colonoscopy, pathological examination, or barium enema.
† Sensitivity = 11/12 × 100 = 91.7%
Specificity = 1,243/1,461 × 100 = 85.1%

TABLE 2

Sensitivity of Hemoccult Test for Detection of Colorectal Cancer*

Hemoccult Test	Cancer Present	Cancer Absent
Positive	3	35
Negative	9	1,426

* Sensitivity = 3/12 × 100 = 25.0%
False negativity = 9/12 × 100 = 75.0%
Specificity = 1,426/1,461 × 100 = 97.6%
False positivity = 35/1,461 × 100 = 2.4%
Positive predictive value = 3/38 × 100 = 7.9%

TABLE 3

Hemoccult Test Results by Size of Polyps

Size of Polyp*	Positive (%)	Negative (%)
< 0.5 cm	3 (2.7%)	108 (97.3%)
0.5–0.9 cm	0 (0%)	56 (100.0%)
1.0–1.9 cm	4 (9.1%)	40 (90.9%)
≥ 2.0 cm	4 (44.4%)	5 (55.6%)
Total	11 (5.0%)	209 (95.0%)

* In a case with multiple polyps, the largest polyp is indicated.

2). Of the 12 workers with colorectal cancers, three had Hemoccult positive tests. Hemoccult yielded 2.4% false-positive reactions, most of which were weakly positive. The positive predictive value for colorectal cancer was 7.9%.

Of the 38 pattern makers with positive Hemoccult tests, only 11 had polyps. Eight of the subjects with positive Hemoccult tests had polyps larger than or equal to 1.0 cm in diameter. Four of these had polyps greater than or equal to 2.0 cm in diameter (Table 3).

Discussion

The accuracy of Hemoccult as a screening test for colorectal cancer has been the subject of considerable debate. The guaiac-impregnated Hemoccult test is widely used because it is simple, inexpensive, safe, and acceptable to those involved. However, the Hemoccult test has low sensitivity.[8] The greatest problem with the Hemoccult test as used today is false-negative results. A negative test result for cancer implies that malignancy has been ruled out to the patient.[9] There are insufficient data now available to know if the Hemoccult test can decrease the mortality from colorectal cancer.[10] Furthermore, this test has no value for patients with ulcerative colitis who may be predisposed to bleeding. In these patients, the search for malignancy by Hemoccult testing will be of no value.[11]

The standard for a true determination in the sensitivity evaluation of Hemoccult testing includes (1) the amount of blood (hemoglobin) in the stool to produce a positive reaction—the degree of sensitivity that can be affected by the amount of hemoglobin; (2) rehydration—sensitivity of Hemoccult increases significantly after rehydration with water and buffer over a pH range of 4 to 7.5; (3) diet—special restriction before the collection of the stool specimen can affect sensitivity; and (4) location of the tumor.

In 1971, Greegor[12] proposed testing asymptomatic patients for fecal occult blood as a screening procedure for colon cancer. Morris et al[13] reported that Hemoccult was more sensitive than stool guaiac or Hematest screening tests. Since that time, numerous investigators have evaluated the effectiveness of the Hemoccult test. Serious problems with both false positives and false negatives have been reported. The initial encouraging results by Greegor in 1967 were followed by several uncontrolled studies[14,15] and other controlled studies[16,17] where Hemoccult was used in combination with sigmoidoscopy. The reported positive rates in those studies range from 0.9% to 3.5%. The predictive values for colorectal cancer range from 4.7% to 14.9%. These findings should leave the efficiency of Hemoccult screening in doubt. Table 4 lists factors affecting false positives and false negatives from the Hemoccult test. Several factors can account for the sensitivity and specificity.

In the present study, sensitivity of the Hemoccult test was 25%. The low positive predictive value of 7.9% falls within the range reported in the other studies. Many participants who are free of disease may be referred for diagnostic evaluation, incurring unnecessary expense, discomfort, and anxiety. The sensitivity may well reflect variations in screening program design and test protocols. The specificity of this test depends on the factors contributing to the false positives, including diet, aspirin, rehydration, and cimetidine. In the present study, the false-positive rate of 2.4% is lower than the 12% reported by the Morris study.[13] Red meat in the diet has been found to greatly increase the number of false positives, with specificity decreasing to as low as 77%.[18] Large amounts of peroxidase, found in vegetables such as tomatoes and beets, result in high false positivity. The peroxidase activity of hemoglobin is critical for the transfer of oxygen resulting in the oxidation of the phenolic guaiac compounds, which are colorless, to the blue quinone form.[19] Rehydrating Hemoccult slides with water restores their sensitivity.[20,21]

The recent introduction of Hemoccult II slides, while improving sensitivity over standard Hemoccult, adds further complexity to the issue. Rehydration of Hemoccult II substantially lowers specificity[22,23] because the number of false positives also increases with this maneuver. Recently, cimetidine tablets have also been postulated to cause false positives.[24] In contrast, vitamin C has been reported to cause false negatives.[25] Delay of

TABLE 4

Factors Resulting in False Positives and False Negatives in Hemoccult Testing

- False Positive
  - Diet: red meat, peroxidase-containing vegetables (beets, horseradish, tomatoes, or cherries)
  - Drugs: aspirin, cimetidine tablets (FDC Blue Lake No. 2)
  - Misleading color change
  - Rehydration of Hemoccult II
- False Negative
  - Vitamin C
  - Delay developing slides (≥ 4 d)
  - Insufficient number of slides
  - Contaminated slides
  - Low bulk diet

four or more days in developing the slides may result in false negatives, especially if bleeding is slight.[31] In the present study, the false positivity or false negativity due to diet was minimized by repeating the test if a subject did not follow the diet restrictions.

Sensitivity should be defined not only in terms of cancers detected, but also in terms of milligrams of hemoglobin detected per gram stool in patients who are bleeding. The enzymatic reaction depends on the concentration of hemoglobin. Small amounts of blood may be undetectable by either the enzymatic reaction or the reaction of peroxidase inhibitors in the stool.[26] Thus, low concentrations of hemoglobin will increase false negativity. The test should be assessed against the ^{51}Cr-erythrocyte method,[27] which has been extensively validated and has an upper normal limit of 2 mg hemoglobin per gram stool, possibly representing ^{51}Cr excreted in bile after elution from red cells.[28] It is important to avoid contamination of stool by urine because eluted ^{51}Cr is excreted by the kidneys.[21]

To use the Hemoccult test for the mass screening of colorectal cancer, the test should be *both* sensitive and specific to be accurate. The present study indicates that the sensitivity of the Hemoccult test is low. The sensitivity was higher for large polyps (≥2 cm in diameter) than for smaller polyps (≤1.9 cm in diameter), as shown in Table 3.

Flexible sigmoidoscopy is a significant advance over rigid proctosigmoidoscopy, producing better results and less discomfort for the patient.[29] This technique has been shown to be a very useful screening tool for detecting colorectal cancer and polyps.[2,5,17,30] Several studies have demonstrated that the rate of flexible sigmoidoscopy is two to four times higher in detecting cancer and polyps than that of rigid sigmoidoscopy because it provides a more thorough examination beyond 25 cm of the colon.[31,32] The prevalence of colorectal polyps as detected by flexible sigmoidoscopy ranges from 9.5% to 19.5% in published studies, as shown in Table 5. In the present study, the crude prevalence rate of polyps, 15.5%, was within the range of the other asymptomatic groups studied.

The American Cancer Society[33] recommends that sigmoidoscopy be used every 3 to 5 years to test persons more than 50 years of age, particularly after two negative examinations 1 year apart. Wherry[5] proposes biannual flexible sigmoidoscopy to determine the efficacy of this screening procedure and removal of all polyps as a means of preventing the development of colorectal cancer. In a recent controlled trial of periodic sigmoidoscopy, 10,000 subjects were randomly assigned to study or control groups. The mortality from colorectal cancer was much lower (five deaths) in the study group than in control subjects (18 deaths) after an 11-year follow-up.[34] In the screening of high-risk groups such as pattern makers, optimal intervals of screening must be individualized to consider polyp history and the Hemoccult test result.

Furthermore, flexible sigmoidoscopy may be justified for several reasons: (1) an accurate diagnosis will be obtained quickly; (2) it will help decrease the number of barium enemas required, and (3) it will result in a higher diagnostic accuracy than the Hemoccult test.[35] However, there are some disadvantages of sigmoidoscopy. Bowel perforation may occur in 0.002 to 0.07% of all procedures, although related mortality approaches zero.[36] In the present study, no evidence of perforation was found in the 1,473 pattern makers screened. Other problems with this instrument include its high cost, but it is possible that further technological developments may allow reduction of the cost and more general use.

Virtually no information exists on the accuracy of flexible sigmoidoscopy in detecting colorectal cancer, as measured by sensitivity and specificity, compared with diagnostic methods such as barium enema and colonoscopy, which examine the entire colon. Leffall[3] notes that approximately 50% to 60% of colorectal cancer can be detected by sigmoidoscopy if the entire 25-cm terminal of the large bowel is visualized. More than half of all colon neoplasia can be detected with flexible sigmoidoscopy.[37]

In the present study of 12 colorectal cancers, 11 were detected by flexible sigmoidoscopy. One case missed by flexible sigmoidoscopy was detected by barium enema and pathological study through biopsy. The sensitivity of the flexible sigmoidoscopy procedure was high (91.7%).

In addition, because of the high sensitivity of flexible sigmoidoscopy, approximately 85% (45) of adenomatous polyps measuring 1.0 cm or larger in diameter would

TABLE 5
Prevalence of Polyps Among Asymptomatic Population Screened with Flexible Sigmoidoscope

References	No. Examined	Age (yr)	Polyps	Prevalence Rate (%)	Prevalence Rate (%) (> 1 cm in Diameter)	Average Insertion of Sigmoidoscope
Lipshutz et al[29]	200*	≥ 40	19	19.5	9.5‡	56 cm
Wherry[5]	316	≥ 50	44	13.9	5.5	55 cm
Meyer et al[32]	122†	≥ 40	16	13.1	8.2	51 cm
Ibrahim et al[30]	409	≥ 20	44	10.8	§	55 cm
WISH, 1984‖	1,473	≥ 20	229	15.5	3.6	50 cm

* Two women were included.
† 79% of the subjects were males.
‡ Prevalence of polyps ≥ 0.5 cm in diameter.
§ Not reported.
‖ Workers' Institute for Safety and Health: Cancer Screening Program in Pattern Makers: An Evaluation of Colorectal Cancer and Morbidity Outcomes, 1984 (unpublished).

have been missed by using Hemoccult testing alone. Sensitivity and specificity would be affected by the location of the tumor. If the location of neoplastic lesion is closer to the anal verge, the sensitivity of Hemoccult and flexible sigmoidoscopy would be higher than those located on the inner intestine because of better visibility of tumor in the lower intestine by sigmoidoscope and more concentrations of blood in the stool. However, no scientific data on the correlation between sensitivity of screening tests and the location of the tumor are found in the literature.

In summary, flexible sigmoidoscopy is a rapid, well tolerated and practical means of identifying neoplasia of the colon-rectum in an asymptomatic population. The application of flexible sigmoidoscopy may be especially effective for the screening of colorectal cancer. It is more sensitive than the Hemoccult test. When a flexible sigmoidoscopy examination is to be performed, there appears to be little justification for using Hemoccult testing.

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Mr Charles Romelfanger, President of the Pattern Makers' League of North America, approved this study. Dr Ray Demers, Wayne State University School of Medicine, provided his medical consultation. Ms Milagro Rodriguez coded the medical data, and Dr Knut Ringen, National Cancer Institute, provided early direction in the implementation of the Pattern Makers' Colorectal Cancer Screening Program.

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The CHAIRMAN. Our next panel is Mr. Craig Berrington, general counsel, American Insurance Association, Dr. Edward J. Burger, director of the Institute for Health Policy Analysis in Georgetown.

Gentlemen, I know you have both worked very hard on your testimony. Incidentally, I have read both of your statements previously, and they will certainly both be inserted in the record.

If you could summarize, because of the time constraints we are under, I would appreciate it very much. We will start off with Mr. Berrington first.

STATEMENT OF CRAIG A. BERRINGTON, GENERAL COUNSEL, AMERICAN INSURANCE ASSOCIATION

Mr. BERRINGTON. Thank you very much, Mr. Chairman. We really appreciate the opportunity to be here today and I will try to summarize the statement.

This is the second time that we have testified on this legislation. When we testified initially, we testified in opposition to it as introduced. We remain opposed. But we do not oppose this legislation lightly.

We are quite concerned with occupational safety and health issues. The American Insurance Association, for which I am general counsel, supported the enactment of the Occupational Safety and Health Act back in the early 1970s. And we continue to support strong measures.

I also want to add, in fairness to the bill's sponsors, that the legislation as it currently stands in the Senate Labor Subcommittee, we believe, is substantially improved over the legislation as introduced.

But we think there are still other changes that need to be made, both from the standpoint of the workability of the legislation, and from the standpoint of liability issues. I would like to talk about five specific areas.

First is the retroactive, or retrospective, application of the law. It has been mentioned here earlier that the legislation requires that for every notification which is issued, it goes not just to current employees, but to individuals who may have been exposed at any time within 30 years of the notification.

That is an extraordinary task to place on either the Federal Government or on individual employers. And I believe, Mr. Chairman, that many of the problems relating to the litigation potential of the legislation really relate to this 30 year retrospective personal notification, where it is going to individuals for whom exposure can never be established with exactitude, perhaps never really established at all, who may have little relationship with the employer, where the exposure may have occurred, and indeed whose relationship to the workforce now may be limited.

We do not believe that the legislation even begins to establish a mechanism for clearly notifying individuals. It has been stated several times here this morning that the obligation is placed on the Government to do the notification.

That is true in a sense. But while the obligation is placed primarily on the Government, the bill anticipates, and really encourages, but clearly anticipates that employers will do the notification themselves. And there is good reason for the bill's sponsors to do so. Because there is no governmental mechanism.

Our belief, however, is that employers probably will not participate in this process, because to do so will provide them with substantial liability potential, if they should miss somebody, with regard to notifying former workers.

And if employers do not participate, what we will have, perhaps, is the Government moving toward massive efforts at personal notification. Those efforts will go to individuals who may have had the most tenuous relationship to the problem or no relationship whatsoever.

It is clear that this 30 year retrospective notification, however, will cause litigation. It will have costs to the Government, and great confusion to individuals.

The second area relates to the determination of an occupational health hazard. That really is the key or the heart of the bill. How does the Risk Assessment Board determine that a particular situation causes a health hazard.

The bill has been improved, in this respect, in many ways. But still the Risk Assessment Board operates essentially on its own.

It operates free from the Secretary of Health and Human Services. It operates free from the health professionals in both the Labor Department and HHS. And it operates free from the medical community generally.

Senator Quayle had proposed at one point that there be established peer review groups made up of the most eminent scientists and practitioners in the Country to review the Risk Assessment Board's determinations with regard to individual notification situations. We would strongly support that type of approach or a similar approach be utilized.

Next, with regard to liability potential, and I am racing through this. I am sorry if my connectives are not very good, Senator Bumpers. But with regard to liability potential, again we think the bill is improved over what it was initially.

But more language needs to be in there. For example, the bill does not eliminate the possibility that massive workers' compensation claims will be based upon the stress caused by receiving the notification itself

Any individual would feel stress getting this notification. And it is possible, indeed we think it is likely, unless there is language in the legislation to deal with it, that this will be a whole new classification of workers' compensaton claims, with the attendant costs.

We also think that it is imperative that employers who do agree to participate in the notification process not be put at risk for doing so. The bill has sort of a strange modus operandi here.

It encourages employers to participate in the notification process. And indeed, it is my view that there is no chance of the bill's working if they do not. Yet at the same time it does not absolutely eliminate the possibility that an employer will be sued if it does participate, on the grounds that it missed an individual who should have been notified.

We are concerned as well, Mr. Chairman, about the failure of the bill to have adequate review procedures for the board's actions.

Let me just say quickly that if the legislation merely had the Administrative Procedure Act applied through all the activities of the board in developing standards and in the review of their standards, it would take two lines in the bill and it would apply to this board the same general review procedures that apply to most other Government agencies.

Finally, as has been said earlier, we think that the OSHA Hazard Communication Standard should be very carefully examined, and OSHA's abilities to do more ought to be carefully examined before new legislation is created.

OSHA has done a lot. It clearly can do more. The question of whether you need a new bureaucracy to carry on this activity is, I think, answered clearly. You do not need a new bureaucracy.

I worked in the Government for 18 years, Mr. Chairman, in the Executive branch under numerous administrations. And setting up a new bureaucracy under the best of circumstances is very difficult, it is very expensive, and anyone who believes that this legislation does not provide for the establishment of a new, costly bureaucracy because it merely talks about establishing a board, is just plain wrong.

The legislation provides for staff for that board, and the $25 million that is provided in the authorization is merely the tip of the financial iceberg.

Use the Government agencies which are there, if it is possible. If one is concerned that OSHA has not moved quickly enough, one should not believe that merely creating a new agency will make the process move more quickly. It really depends on the determination of an administration to move in a particular area or not.

The members of my association are not generally small employers. So I would defer to others who have spoken eloquently about the concerns to small employers.

I think it is fair to say that workers' compensation costs and the litigation costs and medical removal costs are more easily absorbed by large employers than by small. We applaud Senator Metzenbaum's comments this morning about being willing to discuss some exemption with regard to small employers on medical removal provisions.

As a practical matter, it is probably not possible to craft a small employer carve-out with regard to notification itself. Because, again, the mechanism of finding individuals who are employed by a small employer, as opposed to employed by a larger one, when exposed just do not exist. I am not sure of the equity of such a procedure in any case.

These are just illustrative of the problems that exist, Senator Bumpers. We applaud the efforts that Senator Metzenbaum has made to improve the legislation. We have worked with his staff and with others to get the improvements included.

But there are major obstacles still to come. And I think it would be very useful to get the OSHA folks up here, and find out what they can do under current law before we rush to enact new legislation. Thank you again.

[The prepared statement of Mr. Berrington follows:]

STATEMENT OF THE AMERICAN INSURANCE ASSOCIATION

TESTIMONY OF CRAIG A. BERRINGTON

GENERAL COUNSEL, AMERICAN INSURANCE ASSOCIATION

BEFORE THE

COMMITTEE ON SMALL BUSINESS

CONCERNING

S.79, THE HIGH RISK OCCUPATIONAL DISEASE

NOTIFICATION AND PREVENTION ACT OF 1987

JUNE 10, 1987

American
Insurance
Association

The American Insurance Association is a national
trade organization of casualty insurers.

PROFILE

The American Insurance Association is a full-service trade organization of casualty insurance companies. In its present form, the association combines three earlier organizations. One of those, the former National Board of Fire Underwriters, was organized in 1866, making it one of the oldest trade associations in the nation.

The various departments provide members with up-to-date intelligence on legislative, regulatory, judicial and technical developments relating to our industry. The AIA also maintains liaison with insurance regulators, federal and state lawmakers, other state and federal government officials, insurance and non-insurance industry groups and media—supplying information and assistance on issues of mutual concern.

A countrywide system of regional offices and local legislative counsel ensures prompt and rigorous attention to casualty insurance matters. At the same time, technical specialists from disciplines as diverse as law, economics and engineering educate members and outside publics on developments that may affect the industry and its services to the insurance-buying public.

Thank you, Mr. Chairman. I appreciate being invited here today to discuss S.79, the High Risk Occupational Disease Notification and Prevention Act of 1987. My name is Craig Berrington. I am General Counsel of the American Insurance Associaton (AIA). AIA represents property and casualty insurance companies which collectively write a substantial part of all commercial liability and workers' compensation insurance provided in the United States.

On March 9th of this year, we testified before the Senate Labor Subcommittee opposing enactment of this legislation as introduced. We remain opposed. This opposition, however, does not come lightly, Mr. Chairman. Our member companies have an historic interest in the health and safety of America's workers. In fact, we were a critical part of the reform movement that led to the enactment of workers' compensation laws in every state. We are proud to have been a part of that movement and we continue to support responsible measures that will better protect worker health and safety. In fact, AIA was a strong, early proponent of enactment of the Occupational Safety and Health Act.

Moreover, Mr. Chairman, we even agree with the good intentions of S.79. Workers need to know when their working environment is dangerous and they need to know it early. They need to be given instructions on protecting themselves. They ought to have necessary medical monitoring and, of course, necessary medical attention. But, good intentions are not enough. Legislation must be carefully drafted, and good intentions must pass the test of rigorous analysis. In short, the bill must work.

In fairness to the bill's sponsors, I want to underscore that the bill, as reported by the Senate Labor Subcommittee, is significantly improved over the bill as introduced. But it is not yet good enough. Major problems remain which must be addressed. These problems fall into five major areas:

(1) the provisions in the bill that require personal notification to individuals whose last exposure to an occupational health hazard may have been up to 30 years ago;

(2) the procedure by which perceived workplace hazards are turned into notifications;

(3) the liability impact created by the bill both for workers' compensation and in tort;

(4) the lack of review procedures once a determination is made as to what constitutes an occupational health hazard; and

(5) the haste to usher in a new bureaucracy before giving the recently implemented Hazard Communication Standard an opportunity to provide many of the same protections contained in this proposed legislation.

With your permission, Mr. Chairman, I will now discuss each of these items individually and in more detail.

RETROSPECTIVE APPLICATION

Section 6(b)(1) of S.79 mandates that notification be transmitted to persons in a population at risk of disease who have been exposed to the hazard at any time within 30 years of the date of the notification. The legislation places great emphasis on personal notification of these individuals. It directs the Secretary of Health and Human Services (Secretary) to find these individuals and notify them, but assumes that individual employers will voluntarily carry this burden.

It is easy to appreciate the desire of the bill's sponsors to provide this retrospective personal notification in order to deal with persons who may have been exposed to long latency diseases years ago. But the legislation does not begin to provide a mechanism to translate these good intentions into a workable program and thereby raises serious problems.

First, we do not believe there is any way that an accurate personal notification process can be developed for this long of a time span. Therefore, there will be great temptation -- and pressure -- for massive mailings of these notifications by the government, with all the confusion, fear and litigation that such a process will engender. Moreover, since employers will materially increase their vulnerability to lawsuit if they assume some of the notification burden, I do not believe that many of them will participate in the process.

But even if you assume that employers will participate and can be identified, the bill seems to assume even further that every contacted employer has kept accurate records as to every employee who ever worked in the affected division or plant over the past 30 years.

One then has to make another assumption -- that the employer has a current mailing address for employees who left that employer as long as 30 years ago so individual notification can now be given to them. Without this mailing list, the other efforts, as extensive and exhaustive as they may have been, will be of no avail. To the extent that employers do not participate -- or can not provide the appropriate personnel information -- the government must notify. Yet, as we have indicated, there is no way suggested in the legislation for the government to do so -- and for good reason, because the government doesn't have the information to do so.

One last point on this topic also needs to be made, Mr. Chairman. If it does prove possible to meet the three criteria apparently necessary to provide this notification (1. identification of the employers utilizing the substance; 2. identification of employees who were potentially exposed to the substance at those employers' workplaces; and 3. physical location of these employees to provide the individual notice), a final problem remains. Who is going to pay for the resultant increase in claims both in workers' compensation and in tort based on exposures thirty years ago?

For workers' compensation cases, we have proposed a partial solution that state second injury funds be utilized to finance workers' compensation cases where the worker's last exposure to the toxic substance was years prior to enactment of the legislation. This recommendation is in the form of a transitional rule in that it would apply only to exposures to occupational health hazards which are the subject of a notification under S. 79 and which occurred five or more years prior to the date of enactment of the bill. If the 30 year provision must remain in the bill, the second injury funds' assessments are an equitable and practical means of providing the necessary financing for these unanticipated claims.

If the notification problem is not adequately addressed, the process will result in unnecessary confusion, litigation and cost. One way to reduce this problem would be by limiting the presumption of a personal notification to a company's current workers and perhaps retirees. Although this approach may not have the same surface appeal as legislation mandating wholesale notice to every individual exposed at any time over the last 30 years, it has one long term benefit -- it can work. Moreover, public service notices -- which the bill now recognizes but only as a last resort measure -- could easily be used as a primary notification procedure.

DETERMINATION OF AN OCCUPATIONAL HEALTH HAZARD

As you are aware, Mr. Chairman, at the very heart of the proposed legislation is the procedure by which perceived workplace hazards are turned into notifications. It is imperative that this procedure be based on real science and that it be insulated, as far as possible, from pressures to issue notifications prematurely or without adequate scientific justification. The bill, as introduced, raised questions about the extent to which it would incorporate the best available scientific evidence on which to base the decision as to what constitutes an occupational health hazard. Significant improvements have been made in the bill since introduction, but other changes to improve this process are needed.

Most specifically, the bill still does not have an independent scientific check on the Risk Assessment Board's decisions. It is this Board that designates a "population at risk of disease" for the notification mandated by the proposal. In spite of the enormity of this task and the consequences of the Board's decisions, there is no adequate safeguard on the Board's discretion. It would appear to us that some type of scientific oversight of the Board's work would be appropriate. We have suggested that the method advocated by Senator Quayle of a scientific peer review group would meet this need. This peer review group would be appointed by the Secretary of HHS in consultation with the Director of the National Institutes of Health and the Director of the Centers for Disease Control. This review group would help assure that an inappropriate Board decision did not form the basis of a notification. And perhaps even more importantly, it would lend critical public credibility to Board decisions that it did approve.

The Labor Subcommittee bill does contain new features not found in the original legislation that decrease the potential of uncontrolled discretion of the Board. The first is the requirement that the Board members appointed by the Secretary come from a list of nominees submitted by the National Academy of Sciences. Second, the Subcommittee bill expands the number of Board members and diversifies the expertise of those members. The Board will now consist of 7 members instead of the original 5, and the composition will include three members who are not career or commissioned Public Health Service employees, rather than all members being such employees. However, in our opinion, these changes do not as fully address the potential abuse of discretion as would the use of a peer review process. This is especially important since under the legislation the Board operates in almost total independence from the Secretary of HHS, and from the health professionals in that Department and the Department of Labor.

LIABILITY POTENTIAL

The liability potential of S. 79 is also of great concern to us. Language in S.79, as reported by the Senate Labor Subcommittee, states that a determination by the Board that an employee is a member of a "population at risk" may not be introduced into evidence or serve as the legal basis of a claim for workers' compensation or tort. We applaud this addition to the bill. However, additional language is still needed to extend this prohibition to records of proceedings of the Board, as well as to Board reports and to the content or description of any Board notice. In addition, Board findings, determinations, and evidence should not be allowed to serve as the basis of expert testimony in a workers' compensation proceeding or in tort litigation. This language would not prevent the introduction into any proceeding of any scientific report; it would merely prevent that report from being given any added luster because it was part of the Board's proceedings.

Another problem is that the bill may also create a whole new class of workers' compensation stress claims; this would be both unfortunate and expensive. A true occupational disease should be compensable under workers' compensation, but this should occur only if it arises out of and in the course of employment. These conditions are met when the risk of contracting the disease is increased by the nature or condition of employment. To be a valid workers' compensation claim, the requirement of work relatedness must be preserved. Extraordinary effort must be made to prevent mere receipt of notice from taking the place of the requirement of work relatedness. Steps in the right direction have been taken, but more are needed, especially in the area of stress claims.

It is difficult to imagine that it would not be stressful for workers to receive a notice that they have been exposed to a substance and that the exposure could result in an occupational disease or death. The frequency with which this stress would result in a disability or impairment in a workers' compensation sense is, of course, unknown, but the potential for many new cases is very great. We would, therefore, suggest language that would prevent workers' compensation stress claims based on the notification itself. Obviously, stress claims arising from the workplace can be compensated now under state workers' compensation systems. And we are not suggesting any language that would change that right.

Finally, in this regard, we think it imperative to assure that new employer liability is not created by the employer's agreeing to participate in the process of giving notice or undertaking medical monitoring. Under S.79, as we mentioned earlier, no employer has the obligation to provide notification to current or former employees of their being in a population at risk of disease. This responsibility is given to the Secretary of HHS, but with the expectation that many employers will undertake to provide this notification themselves. If employers are going to be encouraged to do this, they should not be subject to lawsuits while doing so, if their actions are in essential compliance with the bill. They should not be punished for trying to notify, if, in good faith, they should fail to notify everyone. Similarly, such protection should be provided for employers who initiate medical monitoring. We have suggested language prepared to deal with both of these situations which we would be happy to share with this Committee.

REVIEW PROCEDURES

Mr. Chairman, we are also concerned about the failure of the bill to build-in adequate procedures to review government action before it is finalized. For example, once the Board makes a determination that a class or category of employees fits the definition of a "population at risk of disease," the procedural protections normally afforded in this type of rulemaking are inappropriately restricted. The Secretary has no voice in determining what constitutes a population at risk of disease and cannot even instruct the Board to reconsider its determinations. Procedures to hasten Board action are provided, but none are granted to slow the process down, if warranted.

The bill reported by the Labor Subcommittee did lengthen the time periods from 45 to 60 days from the day notice is published in the Federal Register for the receipt of written comments by the Board; and from 30 to 45 days from the date of the notice to the date of the hearing. But, this increase in time still may not be sufficient to correct the problems presented by the bill, especially in light of the highly complex scientific subjects that each of these hearings would address. This is especially important because a hearing is the one opportunity for the public to express its views orally on the proposal and for the Board to hear what other occupational disease experts think about its findings.

Moreover, as the bill is currently drafted, only 105 days are provided from the date that the notice first appears in the Register to publication of a rule determining ordering a notification. The bill does provide that, in exceptional cases, this time may be extended, but it may not exceed 150 days from publication in the Register of the initial proposed rule. While we understand the desire of the bill's proponents to keep the Board's work from being bogged down, the bill's mandated time frames force the process and may exalt speed over care. Although the reported bill, unlike the original bill, requires the Board to publish a Federal Register agenda every six months listing the agents that are under review, the agenda, alone, won't solve the problem. The legislation should be amended so the Board is not pressured by time in making its determinations. The Board must have sufficient time to consider divergent views on complex -- and often controversial -- scientific issues.

Our concern with time pressures is highlighted by the provision that allows an aggrieved party to bring a civil action for mandamus if the Board does not complete its final agency action within the 105 or 150 day time requirements. This is an obvious misuse of mandamus, which is not otherwise available for judgmental matters, but only for the most routine, ministerial acts of government. Moreover, no corresponding right to halt this process is allowed a party who thinks that a classification of "population at risk of disease" is being wrongly pushed through the Board.

One major improvement made in the bill concerns the standards for judicial review of Board decisions. The bill now incorporates Administrative Procedures Act (APA) standards. However, the bill still contains a provision that the commencement of judicial proceedings does not operate as a stay on the Secretary's requirement to notify employees unless a court determines that the complaining party is highly likely to succeed on the merits. This is a higher standard than required normally in the federal courts and, therefore, is troubling.

Many of these procedural problems could be adequately addressed if the bill were simply amended to apply the APA to all Board proceedings. We have a difficult time understanding why the bill's proponents have been unable to accept that approach.

NEED TO CONSIDER THE OSHA HAZARD COMMUNICATION STANDARD

Finally, debate on S. 79 should focus on whether the establishment of additional government agencies is useful or necessary, in light of the Labor Department's recently implemented Hazard Communication Standard. Also known as the "Right-to-Know-Standard," this standard requires chemical manufacturers and importers to evaluate the hazards of each chemical they manufacture or import; label each shipped container of a hazardous chemical; and prepare a material safety data sheet ("MSDS") designed to protect workers from these hazards. An MSDS must include the acute and chronic health effects of the chemical, as well as the signs and symptoms of exposure, and any medical conditions which may be aggravated by exposure.

In addition, the Hazard Communication Standard contains requirements for all manufacturers. Each must write and implement a hazard communication program; maintain an MSDS and provide their employees with access to them; and train workers about the hazards, how to avoid them, and how to use the information made available under the standard. The Occupational Safety and Health Administration has announced its intent to expand this standard to all workers exposed to hazardous chemicals.

We applaud this type of effort to notify workers of the potential hazards they face in the workplace. We are also aware of the criticisms of some that the standard does not go far enough because it does not cover former employees or state and local governments. Rather than debate these criticisms, let me state merely my disappointment that some are not willing to allow this standard, the entirety of which has been enforced only since May 25th of last year, an opportunity to work and to evaluate its effectiveness.

CONCLUSION

We have examined the proposed legislation both from the standpoint of the extent to which the insurance mechanism can cope with it, as well as from a broader public policy position. While we may not possess the best perspective on how the legislation would impact small business, there are certain elements that the Committee may want to consider.

By definition, small business is less able to absorb the costs of litigation than its larger counterparts. This is true both for the transaction costs of litigation as well as the actual, resultant losses. Therefore, for small business, preserving the integrity of the workers' compensation system would seem to be of pre-eminent importance. It is the integrity of this sytem which provides the predictability and certainty of costs so often necessary for the survival of a small business. Legislation which tends to undermine this integrity must be very carefully examined to assure that any benefits are not outweighed by the costs. S.79 does not pass this critical examination.

Further, the medical removal protection provisions contained in the bill may present significant problems for our nation's small businesses. Under these provisions, an employer must find an alternative job for employees exposed to an occupational health hazard if the exposure occurred in the course of employment by that employer. The transfer must be provided for as long as a less hazardous or nonexposed job is available. If such a job is not available, the medical removal protection still must be provided for 12 months. For a small employer, meeting this requirement might not be possible economically.

These problems are merely illustrative but they should underscore the fact that very careful consideration should be given to the impact of this bill before Congress moves to enactment. We've tried to be constructive in the process, but don't believe that this legislation merits enactment in its current form.

Thank you.

The CHAIRMAN. Thank you. That was an excellent statement. I am going to exercise my prerogative as Chairman of this Committee, Dr. Burger, with your indulgence, and ask one of my constituents to testify. He is first on the next panel and I would like to hear his testimony before I leave.

So I am going to invite Sam Sowell to come up and testify out of turn. And Dr. Burger, if you will, just remain where you are. We will insert your testimony, Sam, at the right place in the record with the next panel.

STATEMENT OF SAM SOWELL, CHAIRMAN AND CEO, INTERNATIONAL GRAPHICS, LITTLE ROCK, AR, REPRESENTING THE PRINTING INDUSTRIES OF AMERICA

Mr. SOWELL. Thank you. Mr. Chairman and Members of the Committee, my name is Sam Sowell. I am the chairman of the board of International Graphics in Little Rock, AR.

My testimony today is presented on behalf of the Printing Industries of America, the National Association of Printers and Lithographers, and several other major graphic arts trade associations, representing over 30,000 printing and graphic arts firms in the United States.

Senator, with your permission I can greatly summarize my remarks and put the full text in the record.

The CHAIRMAN. It will be inserted in the record, Sam. Please feel free to summarize.

Mr. SOWELL. I would like first to give the Committee a brief overview of our industry.

Of the 20 major manufacturing groups included in the U.S. Government Standard Industrial Classification system, printing and publishing rank number 1, in terms of number of establishments, with over 53,500 establishments.

Rank number 6, in numbers of employees with 1.3 million. At the same time, the average company in our industry has only 23 employees.

Now the company that I am associated with, International Graphics, is actually a conglomerate of five companies employing a total of 300 people in five different entities. Their numbers range from four in one division to 140 in another, and numbers in between.

So we are not exactly classified as small. But essentially we do come under most of the rules and regulations affecting small industry. We produce a range of products from computer forms to general four-color process work used in advertising and promotional displays.

I can assure this Committee that my years of working to build what were in each case struggling small companies into successful operations has given me a keen appreciation for the problems that entrepreneurs, particularly those with small companies, face today.

We, representing the printing industry, are opposed to this bill. In reviewing S. 79 in its various forms, we can find no path of amendment which would make this bill acceptable. And with a handful of exceptions, the business community seems united in that position.

I am sure you are well aware that several large chemical and electronics companies have endorsed this measure. Ask any of them and they will tell you right away that they endorsed it at a time when they were convinced it was going to pass.

The changes these groups were able to make improved the bill. But in our opinion, not nearly enough to make it workable for small business.

Look carefully at who this handful of companies are. Without exception, they are the large multi-national corporations with longstanding corporate health and safety programs that produce a percentage of their product overseas, a significant percentage, which is out of the reach of this legislation.

The thousands of business and associations that remain opposed to this legislation are heavily weighted toward small, domestic manufacturers who are struggling to compete in a fast-changing economy.

There are several portions of the bill which our industry has strong objections to, and I would like to invite your consideration of these objections.

S. 79 proposes that companies provide medical monitoring for employees who have been exposed to hazardous workplace chemicals. Because most printing companies are small, there is no real basic division between the management and the rank and file.

Consequently, any printing industry chemical that triggers notification would likely extend notification and medical monitoring to virtually every employee in a facility.

Why would we expect that some printing industry chemicals would trigger notification under the standard? The reason is simple. The printing industry, like most manufacturing industries in this Country, have used over the past 30 years numerous products which research has now shown to be harmful.

One of the most obvious substances used in the printing industry, as well as the newspaper industry, was lead. Lead was as common in ink pigments in previous years as it was in paint pigments.

Lead was also used in the industry in the typesetting environment. The old hot metal typesetting machines of the past set type in molten lead.

In 1980 OSHA issued a lead use standard, which has minimized the use of lead in all industries. This standard, combined with changes in industry technology, has resulted in safer workplaces.

Despite the fact that we have had a workable standard in place on the use of lead for the past several years, S. 79 would, in effect, take this issue back yet another 23 years to make people in our industry and other industries responsible for exposure prior to the current Federal regulatory program.

Let us imagine that an employee at a printing company developed a health problem which was identified as being the result of lead exposure. From our standpoint, it would be extremely difficult for anyone to determine whether such exposure was due to the workplace, the paint which may have existed in his residence, or to automobile emissions.

All of these would expose the employee to lead. Nevertheless, we are confident that if a notification program was put in place for printing employees who are exposed to lead, that numerous liability cases would arise and small companies throughout the United States would be put in a position of having to demonstrate that it was not necessarily the exposure in the printing company that caused the problem.

It is important to add that costly medical monitoring provisions under this bill would be triggered regardless of whether or not an employee actually showed the symptoms of a lead-related illness.

Is this legislation necessary? We believe not. Since May 1986, just a year, all chemical using manufacturing industries have been required, under OSHA, to provide employees with information and training on the safe use of chemicals in the workplace.

The new OSHA standard goes to the heart of this debate by focusing Federal resources on hazard prevention and safety awareness, rather than on after-the-fact notification which may or may not reach the right people.

The portions of S. 79 which cover current employees duplicates much of the Hazard Communication Standard. Such duplication is unnecessary and counter-productive, particularly in light of the hundreds of millions of dollars and countless man-hours spent by industry and Government to implement the new law.

If the current standard is deficient in any way, and we do not think it is, Congress should fix it. But how would Congress know whether it works or not? We are barely a year into the most sweeping regulatory proposal ever put forward by OSHA, and Congress has not held a single day of oversight hearings on the program.

Instead, they focused on a totally new approach that is fraught with enormous risk and potential expense that could impose severe economic harm for our economy. There must be a limit to the burdens placed on small business.

The Congress has required business to inform its employees. We are doing it. The Congress has required business to inform its community. And we will soon be doing that, under the Superfund Community Right-To-Know Act.

But to go back for 30 years retroactively, and to expose small business to the cost and potential liability problems of exposure to substances which were considered safe at the time is to me inconceivable, if not impossible.

These are some reasons why we are opposed to the S. 79. While well-intentioned, this measure could well have a crippling effect on many small businesses in your State and mine for many years to come. I thank you.

[The prepared statement of Mr. Sowell follows:]

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Government Affairs
Department

TESTIMONY OF THE

PRINTING INDUSTRIES OF AMERICA

ON THE

HIGH RISK OCCUPATIONAL DISEASE NOTIFICATION AND PREVENTION ACT OF 1987

(S. 79)

BEFORE THE

SENATE SMALL BUSINESS COMMITTEE

June 10, 1987

For Additional Information Contact:

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TESTIMONY

Mr. Chairman and members of the Committee, my name is Sam Sowell, I am the Chairman of the Board of International Graphics in Little Rock, Arkansas. My testimony today is presented on behalf of the Printing Industries of America, the National Association of Printers and Lithographers, the National Association of Printing Ink Manufacturers, the Graphic Arts Technical Foundation, the National Association of Quick Printers, the Book Manufacturers Institute and the Gravure Association of America representing over 30,000 printing and graphic arts firms in the United States.

Let me just give you a brief overview of our industry. Of the 20 major manufacturing groups included in the U.S. government's Standard Industrial Classification system (SIC), printing and publishing (SIC 27) ranks:

#1 in Number of Establishments: 53,500, an increase of 27% since 1972, 41% over past 15 years;
#6 in Number of Employees: 1.3 million
#6 in Total Dollar Payroll: $26.2 billion
#7 in Value Added by Manufacturing: $67 billion
#8 in Dollars Reinvested in Capital Expenditures: $4 billion
#9 in Value of Shipments: $105 billion
#11 in Average Hourly Earnings: $9.40

Despite its high ranking among manufacturing industries, printing and publishing is composed of thousands of small businesses giving employment to skilled workers: 80% or 42,500 firms, have fewer than 20 employees.

We cite these figures to establish the fact that the printing industry may be the industry most adversely affected by S. 79. The adverse affect is due not only to the overall size of the industry but to the small size of our individual companies. Small to mid-sized companies in the printing and graphic arts industry are simply ill-equipped to deal with detailed federal regulations. They rarely have the resources to maintain professional health and safety personnel in their plants. The job of maintaining compliance with federal safety regulations, environmental regulations, tax matters, and other requirements of government fall most often to the company owner. The company owner is often totally dependent on trade associations or the media for the latest information on congressional and executive branch activity. Even with our 300 employees we have no full time health and safety department. These functions are carried out by our Human Resources Department. It is safe to say that except for a handful of companies in our industry none can justify a full time health and safety professional.

International Graphics is actually a conglomerate of 5 companies employing 300 people in a variety of graphic arts endeavors. While we do not purport to be a small company, the individual components of our corporation range from small to mid-sized establishments. Fast Print in Little Rock employs 4 people in a quick printing operation. The Office Products Store in Little Rock employs 20. Harvey Press in New Orleans employs 60. The Creative Printing Division in Little Rock employs 79 and International Business Forms, also in Little Rock, employs 140. We produce a range of products from computer forms to general 4 color process work used in advertising and promotional displays.

I can assure this committee that my years of working to build what were in each case, struggling small companies, into successful operations has given me a keen appreciation for the problems that entrepreneurs, particularly those with small companies, face today.

We are adamantly opposed to S. 79. In reviewing S. 79 and its various forms we can find no path of amendment which would make this bill acceptable. And with a handful of exceptions the business community is united in that position.

I am sure you are well aware that several large chemical and electronics companies have endorsed this measure. Ask any of them and they will tell you right away that they endorsed it at a time when they were convinced that it was going to pass. The changes these groups were able to make improved the bill, but in our opinion, not nearly enough to make it workable for America's small businesses.

Look carefully at who this handful of companies and associations are. Without exception, they are large, multinational corporations with long-standing corporate health and safety programs, that produce a significant percentage of their products overseas -- out of the reach of this legislation.

The thousands of businesses and associations that remain opposed to this legislation are heavily weighted toward small domestic manufacturers who are struggling to compete in a fast changing economy.

S. 79 begins with a noble purpose. That purpose is the desire on the part of the sponsors to provide a mechanism to provide information to individuals who have been exposed to health-threatening chemicals in the workplace. No one can argue that this purpose is not a good one, however, the bill simply won't work. Since no federal laws existed prior to the early 1980's requiring the permanent retention of records, companies simply don't have records on former employees going back 30 years.

Had the sponsors provided for the creation of the risk assessment board with funding available to do public service announcements, to keep the public aware of health threatening workplace chemicals, we would have been supportive, but the bill does not do this. The bill places potential burdens on business that are so great that many small businesses will have to evaluate their continued existence as a result of the legislation. Many other potential entrepreneurs will be discouraged from entering the marketplace. Further, and perhaps more significantly, companies currently manufacturing in the United States will find one more reason to manufacture out of this country, where such requirements are not part of the regulatory system.

I would like to discuss several portions of the bill which our industry has strong objections to and invite your consideration of our objections.

Medical Monitoring

S. 79 proposes that companies provide medical monitoring for employees who have been exposed to hazardous workplace chemicals. The nature of most commercial public printing environments is such that all employees in a facility are exposed to all the hazardous substances used in the facility. Because most printing companies are small there is no real basic division between the management and the rank and file employees. The fact of the matter is, in most small business environments the owner is as much involved in the day-to-day production as any of the employees in the business and would be as exposed as anyone to the substances that are used. Consequently, any printing industry chemical that triggers notification would likely extend notification and medical monitoring to virtually every employee in a facility. The bill proposes that the cost of such monitoring would be borne exclusively by the business.

We have been unable to identify any printing company whose current insurance policy would cover medical monitoring as a result of this bill. It is of course impossible to determine the precise cost of medical monitoring. We know however, that even routine examinations of the type that would be required by this bill would cost from several hundred dollars to several thousand dollars depending on the complexity and the discovery of the initial testing. It is also obvious that in many cases such testing may have to be done repeatedly over the course of years. Even at a modest cost of $300.00 per employee, a typical 20 person print shop with 6 people eligible for monitoring would be required to pay at least $1,800 and up to $6,000 in uninsured medical costs.

Why would we expect that some printing industry chemicals would trigger notification under this standard? The reason is simple. The printing industry, like most manufacturing industries in this country has used, over the past thirty years, numerous products which research has now shown to be harmful. One of the most obvious substances used in the printing industry as well as the newspaper industry was lead. Lead was as common in ink pigments in previous years, as it was in paint pigments. Lead was also used in the industry in the typesetting environment. The old hot metal typesetting machines of the past set type in molten lead.

In 1980, OSHA issued a lead use standard, which has minimized the use of lead in all industries. This standard, combined with changes in industry technologies has resulted in safer workplaces. Despite the fact that we have had a workable standard in place on the use of lead for the past several years, S. 79 would, in effect, take this issue back another 23 years to make people in our industry and other industries responsible for exposure prior to the current federal regulatory program. Let's imagine that a employee at a printing company developed a health problem which was identified as being the result of lead exposure.

From our standpoint it would be extremely difficult for anyone to determine whether such exposure was due to the workplace, to paint which may existed in the home at the time, or to automobile emmissions. All of these would expose the employee to lead. Nevertheless, we are confident that if a notification program was put in place for printing employees who were exposed to lead, that numerous liability cases would arise and that small companies throughout the United States would be put in a position of having to demonstrate that it was not necessarily the exposure in the printing company that caused the problem.

Liability

We have been able to identify no procedure under this bill which would shield companies in our industry from potential liability. The fact that the notification itself cannot be used in a liability claim or a worker's compensation claim is of little comfort. Information about the substances which have been used in the printing industry over the past 30 years, which we now know can cause health problems, are part of the general base of scientific knowledge and would be available from numerous independent sources. Consequently, the fact that one is notified or not notified is not going to alter the information available, it will only serve to trigger an inquiry for additional information. We are certainly aware that there are a number of lawyers who aggressively pursue class action type liability suits for occupational disease and health problems and that in many cases clients for such lawyers are recruited by newspaper ads, television and radio announcements, promising to provide all the necessary scientific data to support the claim. A typical printing company which has been in operation for thirty years has two hundred former employees. It is easy to imagine that at least one of these employees might join in a liability suit. Furthermore, insurance protection from these kinds of suits will simply be unavailable.

Alternative Work Assignments

The bill requires that employees exposed to hazardous substances must, on the advice of their doctor, be reassigned to another position within the company. It only makes sense that a worker at risk in a certain position should be reassigned. Once again this is an admirable goal, but the bill doesn't stop here. It further requires an employer to pay an employee up to one year's wages and benefits if no reassignment opportunity exists. A great idea, but a tremendous cost burden for a company.

Is This Legislation Necessary?

No! We believe strongly that S. 79, no matter what its good intentions may be, is unnecessary. Since May of 1986, all chemical using manufacturing industries have been required, under the provisions of the OSHA Hazard Communication Standard, to provide employees with information and training on the safe use of chemicals in the workplace. Employers are required to maintain material safety data sheets provided by their chemical suppliers and manufacturers and make this information available to employees. They must have a written hazard communication program on file and they must provide employees with specific information and training regarding the chemicals they use in their particular job. This program has been in broad use in our industry and is, we believe, achieving the desired result of improving the awareness of chemical hazards in the workplace.

The new OSHA standard goes to the heart of this debate by focusing federal resources on hazard prevention and safety awareness rather than on after-the-fact notification which may or may not reach the right people. The portions of S. 79 which cover current employees duplicates much of the Hazard Communication Standard. Such duplication is unnecessary and counterproductive, particularly in light of the hundreds of millions of dollars and countless man hours spent by industry and government to implement the new law. If the current standard is deficient in any way, and we don't think it is, then Congress should fix it. But how would Congress know whether it works or not. We are barely a year into the most sweeping regulatory proposal ever put forward by OSHA and Congress hasn't held a single day of oversight hearings on the program. Instead, they've focused on a totally new approach that is fraught with enormous risks and potential expense that could impose severe economic harm on our economy.

The Printing Industries of America and its sister associations have worked diligently to inform employees throughout the industry of the need to comply with the Hazard Communication Standard. More than two years ago, the Printing Industries of America convened a panel of safety experts who developed a complete compliance manual that has received broad circulation within our industry. Thousand of manuals and countless seminars and briefings have helped printing employers stay abreast of this issue.

Later this year, the Environmental Protection Agency is expected to issue its final regulations on the new Community Right-to-Know provisions of Superfund, where employers will now be required to provide information about chemical use to their community through various emergency response units coordinated by state and local governments. This is a terrific idea that will provide absolutely useless information to local fire departments and even public libraries that are simply not equipped to handle the workload. All of these requirements have fallen on all of the printing companies in the United States as well as other chemical-using manufacturing industries.

We opposed the Community Right-to-Know provisions under the Superfund law which passed last year, once again not because the general concept of the legislation was flawed but because the bill was poorly structured and places layer upon layer of additional regulatory burden on our member firms at a time when it is increasingly difficult to compete in a world market.

We appeal to you on the same basis today. There must be a limit to the burdens placed on small business. The Congress has required business to inform its employees. We are doing so. The Congress has required business to inform its community. We will soon be doing so. But to go back for thirty years retroactively and to expose small business to the cost and potential liability problems of exposure to substances which were considered safe at the time is inconceivable.

We stated from the outset that there were no amendments which would make this bill satisfactory. However, if this legislation is to be passed we would ask that you consider one important addition. Why not make those companies which manufacture products outside the United States subject to the same requirements as the companies that manufacture products in the United States. It is irrational to us that a printing company in Arkansas would be required to take these steps of notification, medical monitoring and risk liability exposure when the product that is produced by that Arkansas printing company can be produced in Hong Kong, Mexico, or Spain without any such requirements. The electronics industry, which has indicated support for this bill, is able to have its products manufactured in the Pacific Basin and in Latin America where no such requirements exist. The amendments we would recommend are simple. Require all U.S. producers of products manufactured outside this country and imported in this country certified that those products were manufactured under working conditions similar to those in the United States, including the hazardous notification requirement. Without such amendments we are simply continuing to make American business non-competitive.

Please oppose S. 79. While well-intentioned, this measure could well have a crippling effect on many small businesses in your state for many years to come.

The CHAIRMAN. Sam, thank you for a very eloquent statement. I appreciate that very much. And Dr. Burger, I appreciate your indulgence in waiting to let one of my constituents testify before I had to go.

Please feel free to proceed. Sam, thank you very much.

STATEMENT OF DR. EDWARD J. BURGER, JR., DIRECTOR, INSTITUTE FOR HEALTH POLICY ANALYSIS, GEORGETOWN UNIVERSITY MEDICAL CENTER, WASHINGTON, DC

Dr. BURGER. I am delighted to have a chance to testify on this piece of legislation once again. I am a physician and scientist and director of the Institute for Health Policy Analysis at Georgetown.

The issue of notification of workers of environmental chemical and physical hazards in the workplace is certainly one that deserves serious consideration. The terms of that consideration inevitably include matters of prevention of disease, ethical and social concerns as well as attendant and difficult legal and economic questions.

Because of my background, I will focus most of my attention on scientific considerations and the implications of these for health. At the same time, it is my belief that these can only properly be discussed alongside other broader matters.

I believe it is important to remind this hearing that the issue arose originally in the wake of epidemiological studies designed to uncover hazards in occupational settings.

In particular, the National Institute of Occupational Safety and Health, the branch of the Federal Government assigned the task of research on occupational disease, has over the years supported and performed a series of studies on occupationally related disease and premature mortality.

As a result of these studies and, in particular a series of what are known as retrospective mortality studies, questions arose concerning opportunities and obligations for making the experimental results, negative and positive, available to a variety of parties, individual workers, unions, management, families and survivors.

NIOSH, increasingly sensitive to the importance of this matter, mounted a series of initiatives and inquiries, beginning in the 1970s, to examine the question of notification.

They produced a substantial body of guidance and experience, which should be referred to in crafting any new legislative initiative.

One of the matters of particular importance, emphasized throughout all of these inquiries, was that of quality and validity of the medical scientific information upon which any decision to notify rests.

In May 1986, the Board of Scientific Counselors to NIOSH, a group of distinguished advisors to the Government, developed a set of guidelines or criteria for notification of workers of the results of the findings from population studies of occupational groups.

Again, great emphasis was placed on assuring that the decision to notify and the choice of notification route had a sound scientific factual basis.

To establish the quality of the factual basis, the advisory body urged that the data used be drawn from studies which were appropriately designed and analyzed and that the findings used be biologically plausible and consistent with other biological and medical evidence.

Guidelines for determining the seriousness of risk, and therefore guidelines for the degree and depth of notification, should take account of both relative and absolute risk level.

The report of this review by the Board of Scientific Counselors has been entered into the Congressional Record on an earlier occasion. Because I feel its findings are of such importance to the present discussion, I commend it to this Committee as well.

Let me underline, though, once again why in my belief it is so important to be confident in the medical scientific facts when proceeding to notify. One of the implicit and important goals of worker notification is the ever attractive possibility of prevention of disease.

Without question, we should take full advantage of all true opportunities for prevention. There is as well a second fundamental tenet in medicine, however, which says, above all, do no harm.

There is the possibility in every experimental medical study of reaching both false negative conclusions—that is, persons or groups who have a disease but are not recognized as such—and false positive conclusions—persons or groups incorrectly identified as having been made ill by the exposure in question.

In the present context, the false positive question is a serious challenge. As others have observed, the person notified of a risk, but who does not develop a disease, has many of the same needs as one who does.

The creation of concern or even invalidism, because of false signals, certainly would not square with doing no harm in the eyes of my profession, and would be irresponsible.

There are some features that one can consider in the sense of insisting on the quality and soundness of interpretation of underlying data. First of all, the statutory definition of an occupational health hazard in this legislative proposal could be made more rigorous.

I would suggest the following. I would suggest words that say, the term—

> Occupational health hazard means a chemical or physical or biological agent generated by or integral to the work process and found in the workplace, or an industrial or commercial process found in the workplace for which there is—

And this is an alternative to what is presently contained in the bill—

> A reasonable probability from valid epidemiological or clinical evidence, conducted, analyzed and interpreted in accordance with established scientific principles, that chronic health effects have occurred in exposed employees, and that these health effects are causally associated with such exposures.
>
> Determination of causal association, in this case, should comprehend features of the strength of the statistical association, consistency, and specificity of the association, biological plausibility, and consistency with evidence from other sources.

A Risk Assessment Board, as outlined in S. 79, can be an important element in ensuring the integrity of the scientific basis for notification, and indeed of the whole notification process.

I would urge consideration of some modifications:

1. The membership of the board should be drawn entirely from among a group of distinguished clinicians and scientists outside the Government. This will go far toward assuring the depth of knowledge required and the public's confidence in the process.

2. Because diverse technical subjects will arise, the legislation should permit the establishment of various panels of experts from time to time as needed.

3. The board should be charged at the outset with taking stock of the general problem of notification, the degree to which present public and private efforts at identification of workplace hazards contribute to satisfy the challenge of notification, and to what extent any of the present efforts might be further built on.

4. The board should advise on the consequences of notification for health of workers, for other actions such as continued monitoring and followup, and for expenditures, both public and private.

5. The board should develop criteria and guidelines for notification. Again, these criteria should guide a determination as to when a notification of any sort should be triggered and what degree or depth of notification should be directed by what degree of risk.

Emphasis should be placed on the quality and validity of the underlying medical scientific information. Application of the criteria should be done with flexibility, and should take explicit account of broad social, legal, ethical, and economic factors flowing from notification.

I understand the Committee is interested in events and obligations that would follow from notification. As you can see from my testimony, notification of the possibility of serious disease or premature mortality without provision for following those notified for diagnosis or, if necessary, treatment, would not be responsible.

Accordingly, one should consider the character of those follow-on activities, including their costs. In my view I think the present legislative proposals are open-ended on this, will not be satisfying, and yet will probably produce a substantial amount of expenditure without any enhancement of health.

There does not exist much experience, unfortunately. I will offer one example of a current program, about which I speak indirectly. One current example worth considering is a program of medical surveillance of 400 former employees of a chemical plant in which an exposure to a bladder carcinogen was known to have been likely.

The estimated costs for case finding and notification and provision of diagnostic procedures to a portion of those surveyed, I understand, is of the order of about $1,000 per person per year. This does not include treatment if that becomes necessary.

Finally, I am aware that as presently conceived, the effects of a law such as S. 79 may fall differently on different economic sectors. Let me just offer three suggestions in this matter:

1. Before enacting any legislation on this topic, a better estimate of these costs should be obtained. One of these certainly will be related to post-notification followup and monitoring.

2. It may well be desirable to design a different distribution of those costs than the simple proposal presently contained in S. 79. This might usefully involve a public-private sharing of those costs or the development of some of the principles of insurance.

And finally, let me recommend a feature on behalf of preventive medicine, the central thrust of this legislation. The current version of S. 79 permits the reassignment of workers to other, less hazardous jobs, with no reduction in pay when these work settings are recognized as risks for specific individuals.

It is my belief that this concept should be combined, if adopted, with an explicit directive to screen new workers at the beginning of employment in order to identify particular susceptibilities to environmental hazards for the purposes of employment and placement. Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Burger follows:]

Testimony of

Edward J. Burger, Jr., M.D., Sc.D.

Director

Institute for Health Policy Analysis

Georgetown University Medical Center

Washington, D.C.

Before the

Committee on Small Business

United States Senate

June 10, 1987

My name is Dr. Edward J. Burger. I am a physician and scientist with particular training in the field of preventive medicine. I am the Director of the Institute for Health Policy Analysis, Georgetown University Medical Center. My background includes a Doctor of Medicine from McGill University and a Doctor of Science from Harvard. For nearly a decade, I served on the faculty of the Harvard University School of Public Health where I was engaged in research and teaching in a department dedicated to the study of the biological mechanisms underlying environmentally-caused disease. During the early 1970's, I served in the White House Office of Science and Technology - the staff of the President's Science Advisor.

I am pleased to have an opportunity to offer some comments and observations to this hearing today. The issue of notification of workers of environmental chemical and physical hazards in the workplace is certainly one that deserves serious consideration. The terms of that consideration inevitably include matters of prevention of disease, ethical and social concerns, as well as attendant and difficult legal and economic questions. Because of my background, I will focus most of my attention on scientific considerations and the implications of these for health. At the same time, it is my belief that these can only properly be discussed alongside other, broader considerations.

The specific issue of this hearing and the subject of the current legislative proposals under consideration concerns opportunities and obligations for notification of workers of the findings of scientific inquiries concerning occupational risks. I believe that it is important to remind this hearing that the issue arose originally in the wake of epidemiological studies designed to uncover hazards in occupational settings. In particular, The National Institute of Occupational Safety and Health, the branch of the Federal government assigned the task of research on occupational disease has, over the years, supported and performed a series of studies of occupationally related disease and premature mortality. As a result of these studies and, in particular, of a series of what are known as retrospective mortality studies, questions arose concerning opportunities and obligations for making the experimental results - negative and positive - available to a variety of parties - individual workers, unions, management, families, and survivors.

NIOSH, increasingly sensitive to the importance of this matter, mounted a series of initiatives, beginning in the 1970's, to examine the subject of notification. They produced a substantial body of guidance and experience which should be referred to in crafting any new legislative initiative.

These inquiries took note of a breadth of important issues - the rights of workers to be informed, obligations of various parties (including the government) to provide information, the importance of follow-up monitoring in the wake of notification, and costs involved in any notification program. One matter of particular importance was emphasized throughout all of these inquiries. This concerns the quality and validity of the medical-scientific information upon which any decision to notify rests.

In May 1986, the Board of Scientific Counsellors to NIOSH, a group of distinguished advisors to the government, developed a set of guidelines or criteria for notification of workers of the results of findings from population studies of occupational groups. Again, great emphasis was placed on assuring that the decision to notify and the choice of notification route had a sound, scientific factual basis. To establish the quality of the factual basis, the advisory body urged that the data used be drawn from studies which were appropriately designed and analyzed and that findings used be biologically plausible and consistent with other biological and medical evidence. Guidelines for determining seriousness of risk and, therefore, guidelines for degree and depth of notification should take account of both relative and absolute risk level.

The Board of Scientific Counselors emphasized the importance of using these guidelines _flexibly_ when designing the plan for notification. The report of this review by the Board of Scientific Counselors has been entered into the Congressional Record on an earlier occasion. Because I believe its findings are of such importance to the present discussion, I commend it to this Committee.

Let me underline once again why it is so important to be confident in the medical-scientific facts when proceeding to notify. One of the implicit and important goals of worker notification is the ever attractive possibility of _prevention_ of disease. Without question, we should take full advantage of all true opportunities for prevention. There is, as well, a second fundamental tenant in medicine which says that, "above all, do no harm."

There is a possibility in every experimental medical study of reaching both false negative conclusions (persons or groups who have a disease but are not recognized as such) and false positive conclusions (persons or groups incorrectly identified as having been made ill by the exposure in question). In the present context, the false positive question is a serious challenge. As others have observed, "A person notified of a risk, but who does not develop a disease, has many of the same needs as one who does." The creation of concern or even invalidism because of false signals certainly would not square with "doing no harm" and, in the eyes of my profession, would be irresponsible.

There are some features that one can consider in the sense of insisting on the quality and the soundness of interpretation of the underlying data.

The statutory definition of an occupational health hazard can be made more rigorous. I would suggest the following:

The term "occupational health hazard" means a chemical, a physical , or a biological agent, generated by or integral to the work process and found in the workplace, or an industrial or commercial process found in the workplace, for which there is a reasonable probability from valid epidemiological or clinical evidence (conducted, analyzed and interpreted in accordance with established scientific principles) that health effects have occurred in exposed employees and that these health effects are causally associated with such exposures. Determination of causal association in this case should comprehend features of the strength of the statistical association, consistency, and specificity of the association, biological plausibility, and consistency with evidence from other sources.

A Risk Assessment Board, as outlined in S. 79 can be an important element in assuring the integrity of the scientific basis for notification and, indeed, of the whole notification process. I would urge consideration of some modifications, however:

1. Membership of the Board should be drawn entirely from among a group of distinguished clinicians and scientists outside the government. This will go far toward assuring both the depth of knowledge required and the public's confidence in the process.

2. Because various technical subjects will arise, the legislation should permit the establishment of various panels of experts from time-to-time as needed.

3. The Board should be charged at the outset with taking stock of the general problem of notification, the degree to which present public and private efforts at identification of workplace hazards contribute to satisfy the challenge of notification, and to what extent any of the present efforts might be further built upon.

4. The Board should advise on the consequences of notification for health of workers, for other actions such as continued monitoring and follow-up, and for expenditures - both public and private.

5. The Board should develop criteria and guidelines for notification. Again, these criteria should guide a determination as to when a notification of any sort should be triggered and what degree or depth of notification should be directed by what degree of risk. Emphasis should be placed on the quality and validity of the underlying medical-scientific information. Application of the criteria should be done with flexibility and should take explicit account of broad social, legal, ethical, and economic factors flowing from notification, without compromising notification.

I understand that the Committee is interested in events and obligations that would follow from notification. As you can see from my testimony, notification of the possibility of serious disease or premature mortality without provision for following those notified for diagnosis or, if necessary, treatment, would not be responsible. Accordingly, one should consider the character of those follow-on activities, including their costs.

There does not exist much direct experience. One current example worth considering is a program of medical surveillance of 400 former employees of a chemical plan in which exposure to a bladder carcinogen was known to be likely. The estimated costs for case finding and notification and provision of diagnostic procedures to a portion of those surveyed is of the order of $1,000 per person. This does not include treatment if that becomes necessary.

Finally, I am aware that, as presently conceived, the effects of a law such as S. 79 may fall differently on different economic sectors. Let me offer the following recommendations:

1. Before enacting any legislation on this topic, a better estimate of these costs should be obtained. One of these certainly will be related to post-notification follow-up and monitoring.

2. It may well be desirable to design a different distribution of those costs than the simple proposal presently contained in S. 79. This might usefully involve a public-private sharing of these costs or the development of some principles of insurance.

3. Finally, let me recommend a feature on behalf of preventive medicine, the central thrust of this legislation. The current version of S. 79 permits the reassignment of workers to other, less hazardous jobs with no reduction in pay when these work settings are recognized as risks for specific individuals. This concept should be combined with an explicit directive to screen new workers at the beginning of employment in order to identify particular susceptibilities to environmental hazards for the purposes of employment and placement.

HON. JAMES R. SASSER, A U.S. SENATOR FROM THE STATE OF TENNESSEE

Senator **Sasser** [presiding]. Well, thank you very much, Dr. Burger. Let me just ask you a question or two.

Dr. Burger, what would be involved in the screening of applicants for jobs requiring exposure to hazardous processes or chemicals, as you suggested in your testimony? What types of tests, for example, do you think would be necessary?

Dr. **Burger**. Well, at the very least, a very simple screening test such as the taking of a history, as to social habits, underlying disease, smoking, pregnancy, other matters that may render a particular group of people more susceptible than others.

I am repeatedly reminded that it is difficult for an employer to lay on a new employee, a prospective employee, this sort of an examination for the purpose of either employment or a job placement.

I think we should re-examine that, if in fact the real role of this whole endeavor is prevention of disease, because it is terribly important.

Senator **Sasser**. Well, improved worker health would definitely save money on down the line for the employer and others.

Do you have any idea how long it would take for predicted cost savings to result from the passage of a bill containing some of the suggestions that you have offered here today?

Dr. **Burger**. Well, you are asking me whether I think S. 79, or a modification of it, will in fact result in cost savings. I cannot promise that. I am frankly not sure that it will.

Senator **Sasser**. Well, thank you for a very forthright answer. Gentlemen, I thank you for appearing here this morning, and giving us the benefit of your views. It has been very educational. I thank both of you.

Our next group of witnesses this morning, we have already heard from Mr. Sam Sowell. And our next panel will consist of Mr. Richard Gallagher, president of the Gallagher Corp.

I see that Senator Karnes is arriving, who is going to Chair the Committee here for a moment. Senator Karnes, our next panel consists of Mr. Richard Gallagher, the president of the Gallagher Corp. in Gurnee, IL. He is representing the National Association of Manufacturers.

He will be joined by Mr. Mark Greenbury, vice president of the Arrow Smith Tool & Dye Co. of Southfield, MI, who represents the Machining and Tooling Association.

Is Dr. Hayes here? Dr. Hayes, I think, is on this panel also. He is the chairman of the Committee on Safety and Health of the American Textile Manufacturers in Greensboro, NC.

Have we identified everybody? We have another gentleman at the witness table there. Would you identify yourself please, sir?

Mr. **Hahn**. Yes, sir. My name is Bruce Hahn. I am the manager of government affairs for the National Tooling and Machining Association.

Senator **Sasser**. So you are here accompanying Mr. Greenbury this morning, to make sure that he gets everything correctly done?

All right, gentlemen, we will begin with you, Mr. Gallagher. And I am going to have to take my leave in just a moment, and Senator Karnes is going to take the chair here. Mr. Gallagher.

STATEMENT OF RICHARD GALLAGHER, PRESIDENT, GALLAGHER CORP., GURNEE, IL, REPRESENTING THE NATIONAL ASSOCIATION OF MANUFACTURERS

Mr. GALLAGHER. Thank you, sir. Mr. Chairman and Members of the Committee. My name is Richard Gallagher, and I am president of the Gallagher Corp., which is located in Gurnee, IL, a suburb of Chicago.

I am here today on behalf of the National Association of Manufacturers' 9,000 small businesses to offer comments on the issue of worker risk notification, and specifically the pending legislation, S. 79.

I would like to thank you for inviting me, and I would request that you accept my written testimony for the record.

HON. DAVID K. KARNES, A U.S. SENATOR FROM THE STATE OF NEBRASKA

Senator KARNES [presiding]. Without objection, so approved.

Mr. GALLAGHER. The National Association of Manufacturers believes adamantly in providing a safe workplace for America's workers. We believe every measure possible should be taken to prevent occupational hazards of every type.

We do not believe, however, that S. 79 will do anything substantive to achieve this lofty goal. Let me explain by illustrating what my company does.

I founded the Gallagher Corp. in 1965 to produce a new type of man-made rubber, generically known as polyurethane elastomers. We are now in our 22d year of production.

We employ 39 people, and we have sales of $4 million annually. While we handle six very hazardous chemicals among a total of 140 in our work environment, we have never had an exposure incident.

Three of the chemicals we use, methylene chloride, toluene diisocyanate, and methylene bis 2 chloraniline, have been listed as potential carcinogens.

Through close cooperation with the Occupational Safety and Health Administration, the Environmental Protection Agency, and the National Institute of Occupational Safety and Health, we have achieved and maintained a high standard for employee safety and health.

All three agencies, at their highest levels, have been generous in their praise of our methods of operating after they have toured our plant. We are proud of our safety record and we believe that these agencies have abundant standards mandating the occupational safety required to prevent disease and notify workers of real workplace hazards.

We have achieved our standards through engineering controls where possible, protective devices for employees where necessary, constant monitoring on our own, and the use of outside industrial hygenists for spot-checking.

Our experience has taught us that more important than all of these is intensive employee training. We videotape, edit, and script every procedure for safety in operation. To ensure a safe workplace, our small company has invested in a variety of capital expenditures, training programs, and compliance manuals during the past decade.

Before Congress embarks on new legislation in this area, I hope you will appreciate what industry is doing and how much we are spending for worker safety. In 1975, we spent $217,000 to update and modernize our plant to reduce employee exposures to process chemicals.

We installed a $42,000 ventilation and exhaust system, a $135,000 closed system for handling suspected carcinogens, and $40,000 for remote handling of bulk chemicals. All this, I might add, was additional to what was already considered by my industry to be a model plant.

Each year since 1976, we have spent about $21,000 a year in personnel costs for controlled area operations, costing us $231,000 in the last decade. We incurred a number of additional expenses in compliance with the Hazard Communication Standard, which went into effect in two parts beginning in November 1985.

We spent $7,200 preparing a compliance manual, another $15,000 re-writing many existing operating procedures to emphasize key points in the Hazard Communication Standard, $10,530 for 12 different meetings for our 39 employees, and in addition we spend an estimated $1,000 a month for the ongoing training of new hires and the followup of our other employees.

These are not our only expenditures. We spent about $2,000 preparing several binders to comply with the Hazard Communication Standard for all our chemicals, and monthly updating.

Another $2,000 was spent complying with overlapping requirements mandated by the State of Illinois. I have with me copies of the Hazard Communication Standard and the material safety data sheets required.

I bring them just to illustrate that there is a considerable amount of coverage in these things. This is the procedural manual for the Hazard Communication Standard. And these are all the material safety data sheets for all of the different chemicals that we have to train our people to.

Someone mentioned that there is a requirement for a one-time training session, and I challenge anyone to think that you could train people one time with all of this information.

In the first 5 months of 1987, we spent $140,000 to buy equipment and to install a television training program to document safe and efficient operation procedures. And finally we spend an additional $300 per month in monitoring and monitoring equipment maintenance.

Our total investment in safety and health protection of employees since 1975 totals $623,000, plus an increased cost of doing business of $3,350 per month. Now, I do not regret these expenditures.

But nevertheless, too much concentration on developing an after-the-fact notification and monitoring system will so dominate our budget that it will reduce our ability to invest in quality control, more sophisticated production equipment, employee training and marketing.

I do want to keep our people healthy. But I also have 38 families who count on me for their livelihood. A pragmatic and judicious balance is required.

As a long time member of the National Association of Manufacturers and a small businessman who prides himself on providing a safe workplace for my workers, I believe S. 79 would not do anything that could not be implemented under the existing OSHA standard.

OSHA already has a mechanism in place, and they have 10 years of experience. We comply with the OSHA requirements and in my case with the State of Illinois regulations, which many States have in varying degrees. On the down side, I can see considerable new costs in medical benefits and workers' compensation.

Second, the mandatory medical monitoring provisions in the bill could produce serious hardships for a small company. The bill requires, upon the request of an employee's physician, that the employee be moved to a non-hazardous job at the same rate of pay and seniority indefinitely.

There is no requirement that the employee actually have symptoms of the disease, merely that his doctor makes the recommendation that a change would be helpful. If no alternative low-risk job exists, the employer would have to award a 1-year, fully-paid leave of absence.

Since my business operates essentially under a large tent, we would have no transfer possibilities, and we would therefore be subject to this extremely onerous provision.

Third, if this bill should pass, I can see all kinds of liability possibilities, with the obvious skyrocketing insurance costs. Specifically, employees could sue for stress, and in many courts throughout this Nation today, employees are allowed to bypass the workers' compensation system and sue their employers in court for failing to notify them of hazards in years past.

For anyone concerned about the liability proliferation now, I can assure you that things will get much worse if this bill passes as is.

The National Association of Manufacturers urge that these liability issues be addressed by: 1, prohibiting stress claims without proof of some sort of physical illness; 2, making workers' compensation the exclusive remedy, which it was designed to be; and 3, limiting lawyers' access to the names of people notified of any hazards.

We do firmly believe in worker safety, ensuring a safe workplace, and diminishing occupational diseases. We believe the emphasis is better placed on working within existing regulations, employee training to ensure disease prevention, and serious consideration of workers' compensation and liability potential.

We would hope the Senate Small Business Committee will consider these issues and support positive efforts along the lines proposed by your colleagues in the House of Representatives, Congressmen Jeffords and Henry, if you would feel that further legislation is indeed necessary. Thank you very much.

[The prepared statement of Mr. Gallagher follows:]

MANUFACTURING CREATES AMERICA'S STRENGTH

Testimony
on

THE HIGH RISK OCCUPATIONAL DISEASE NOTIFICATION AND PREVENTION ACT OF 1987, S. 79

by
RICHARD GALLAGHER

On Behalf of the
National Association of Manufacturers

Before the Senate Small Business Committee
Unite States Senate

June 10, 1987

NAM

National Association of Manufacturers
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The National Association of Manufacturers is a voluntary business association of more than 13,500 corporations, large and small, located in every state. Members range in size from the very large to the more than 9,000 smaller manufacturing firms, each with fewer than 500 employees. NAM member companies employ 85 percent of all workers in manufacturing and produce more than 80 percent of the nation's manufactured goods. NAM is affiliated with an additional 158,000 businesses through its Associations Council and the National Industrial Council.

EXECUTIVE SUMMARY

OCCUPATIONAL DISEASE NOTIFICATION AND PREVENTION ACT OF 1987

S. 79. the High Risk Occupational Disease Notification and Prevention Act of 1987. is being offered as a solution to worker safety and health problems. Although NAM concurs with the basic goal of the legislation. we do not believe that S. 79 is the appropriate vehicle with which to achieve that goal. S. 79 has at least four major flaws: (1) it duplicates already existing health and safety regulations and thus is unnecessary; (2) it contains several medical removal and monitoring provisions whose cost impact. especially on small businesses. will be staggering. resulting in lost profits and lost jobs; (3) it will serve as a catalyst for billions of dollars in liability claims against employers; and (4) the actual impact of the bill on such things as workman's compensation is uncertain at best and devastating at worse. Overall we believe the cost on small business will add as much as 2 percent to my bottom line. without focusing on the real worker safety problem - prevention.

NAM believes a better approach is embodied in a substitute offered by Representatives Henry and Jeffords. This substitute will work within the existing regulatory framework rather than creating a completely new and unnecessary bureaucracy within the Department of Health and Human Services. Simply put. the Henry-Jeffords bill will mandate the expansion of OSHA's Hazard Communication Standard. which currently covers only the manufacturing sector. to cover all employers. Accordingly. in contrast to the after-the-fact notification offered under S. 79. the Henry-Jeffords bill will help to prevent disease by requiring employers to train their workers in how to work safely with the hazards in the workplace. In addition. the bill will create a federal commission to study the feasibility. necessity. and impact of a worker risk notification program.

INTRODUCTION

Mr. Chairman and members of the Committee, my name is Richard Gallagher, Sr. I am president of the Gallagher Corporation, located in Gurnee, Illinois. I am grateful for the opportunity to testify before this committee on behalf of the National Association of Manufacturers to offer comments on the issue of worker risk notification and, specifically, the pending legislation, Senate bill 79, titled the High Risk Occupational Disease Notification and Prevention Act of 1987.

I founded the Gallagher Corporation in 1965 to produce a new type of man-made rubber known as polyurethane elastomers. We are now in our twenty-second year of production. We employ 39 people and have sales of $4 million annually. While we handle six very hazardous chemicals, among a total of 140, in our work environment, we have never had an exposure incident. Three of the chemicals we use, methylene chloride, tolune diisocyanate, and methylene bio 2 choranilene, have been listed as potential carcinogens.

Through close cooperation with the Occupational Safety and Health Administration, the Environmental Protection Agency and the National Institute of Occupational Safety and Health, we have achieved and maintain a high standard for employee safety and health. All three agencies, at their highest levels, have been generous in their praise of our methods of operating, after touring our plant. We are proud of our safety record and believe that the agencies mentioned above have abundant standards mandating the occupational safety required to prevent disease and notify workers of real workplace hazards.

We have achieved these standards through engineering controls where possible, protection devices for employees where necessary, constant monitoring on our own, and outside industrial hygenists for spot checking. Our experience has taught us that more important than all of the above is intensive employee training.

To ensure a safe workplace, our small company has invested $623,000 in safety and health protection of employees since 1975. In addition, we have an increased cost of doing business of $3,350 a month. A substantial portion of these costs are being spent to comply with the Hazard Communication Standard, which went into effect last year. I don't regret these expenditures. Nevertheless, too much concentration on developing an after-the-fact notification and monitoring system will reduce our ability to invest in quality control, production equipment and employee training. I do want to keep our people healthy, but I also have 38 families who count on me for their livelihood.

As a member of NAM and a small businessman who prides himself on providing a safe workplace for my workers, I believe S. 79 would not do anything that could not be implemented under the existing OSHA Standard 29 CFR 1910. OSHA already has a mechanism in place. On the downside, I can see considerable new costs in medical benefits and workers compensation. Our first request is to work through the current regulatory framework.

Secondly, the mandatory medical removal and monitoring provisions in the bill would provide serious hardships for a small company. As you know, the bill requires, upon the employee's physician's request, that the employee be moved to a nonhazardous job. If none exists, an employer would have to pay a year's "severance" pay. Our business operates under one tent, so to speak, and we would have no transfer possibilites. We could, therefore, be subject to paid leaves of absense of one year.

Thirdly, without provisions to protect employers who comply with the provisions of this legislation, I can see all kinds of liability possibilities with the obvious skyrocketing insurance costs.

We do believe in worker safety, ensuring a safe workplace and diminishing occupational diseases. We believe the emphasis is better placed on working within existing regulations, employee training to ensure disease prevention, and consideration of worker's compensation and liability issues. We would hope the Senate Small Business Committee will consider these issues, and support positive efforts along the lines proposed by your collegues in the House, Congressmen Jeffords and Henry, if you feel legislation is necessary.

THE BILL IS REDUNDANT AND UNNECESSARY

Most of the goals of S 79 are being achieved or are achievable through existing statutes and regulations. We have achieved our excellent safety record through the use of engineering controls where possible, protective devices for employees where necessary, constant monitoring on our own, and outside industrial hygenists for spot checking. We videotape, edit and script every procedure for safety in operation. Our experience has taught us that more important than all of the above, is intensive employee training.

Such employee training is now mandated under OSHA's Hazard Communication Standard. This standard, which was implemented in full just about one year ago, is the most expensive and extensive OSHA regulation ever implemented. Currently the standard applies only to the manufacturing sector, but the Third Circuit Court of Appeals ruled last week that the Hazard Communciation Standard must be expanded to include all employers within the next 60 days. We fully expect OSHA to move toward expanding this standard. The standard also requires that employers develop and maintain a written hazard communication program which delineates and describes the hazards in the workplace, that employers label all hazardous substances in and leaving the workplace, and that employers prepare material safety data sheets, or fact sheets, on each hazardous substance in the workplace which describes the substance, provides information on how to avoid harmful exposures, and often provides information on appropriate medical monitoring if an exposure occurs.

As illustrated by our excellent safety record, the mandates of the current regulations and our voluntary safety measures have served to create an extremely safe working environment. This safety, however, has not been without cost. In 1975, for example, we totally reworked our plant to reduce employee exposure to process chemicals at a cost of $217,000. From 1976 to the present we have expended $231,000 in personnel costs for maintaining controlled area operations. From 1985 to 1986 the following costs were incurred from the implementation of the Hazard Communication Standard: (1) $7200 for the preparation cost of a hazard communication manual; (2) $10,530 for twelve meetings of our 39 employees to train them in how to work safely with the hazardous substances in the workplace; (3) $1000 per month for the ongoing costs of training new hires and follow-up for current workers. In 1986, we spent $15,000 in rewriting many of the operating procedures to emphasize key points of the Hazard Communication Standard. In 1987 thus far we have expended the following funds on health and safety issues: (1) $2000 for preparation and updating of the binder required under the Hazard Communication Standard for material safety data sheets; (2) $2000 for measures taken to comply with the Illinois worker-right-to-know law, including training of the local fire department and paramedics in handling a possible incident; (3) $135,000 for the installation of audio visual training of employees in safe and efficient work methods; (4) $5000 for the purchase of safety films and tapes; and (5) $300 a month in monitoring equipment maintenance. Our company's total investment in safety and health protection of employees since 1975 totals $623,000 plus an increased cost of doing business of $3,350 per month.

I urge a more thorough assessment of the need for a new program within an entirely new agency which in many ways will overlap state and federal regulations and legislation that already exist. OSHA's Hazard Communication Standard just went into effect in May, 1986 and OSHA is enforcing it. The agency has already issued 15,000 citations. Before the recent Third Circuit Court decision, OSHA announced that it will soon expand the standard to cover all employers. Given the multitude of comprehensive federal and state regulations which already exist in the worker health and safety area, NAM urges the Congress not to create a new bureaucracy invested with jurisdiction over worker safety and health issues. Such duplicative regulation can only make America's industry, especially small businesses, move further into the noncompetitive realm.

THE BILL CONTAINS ONEROUS AND UNREASONABLE LABOR PROVISIONS

S. 79 contains at least two medical removal provisions which will have a significantly adverse impact on all businesses, but will especially be hard on small businesses. First, there is the medical removal provision. This provision provides that if an employee's physician determines that the employee should be transferred from an exposed position to a nonexposed position, the employer must transfer the employee at no loss of wages, seniority or benefits. If no alternative position exists, the employer must award the employee with a fully paid twelve month medical leave. If the employer wishes to challenge the physician's determination, the bill provides for the employer to invoke a cumbersome arbitration process, at the employer's expense.

This medical removal provision is onerous and unreasonable in at least three respects. First, unlike other medical removal regulations, this provision does not require any symptom of the disease prior to transfer. Rather, the transfer is initiated solely by the employee's physician's determination that such a transfer should take place. Accordingly, workers who are transferred may never develop the disease for which they were transferred. Moreover, given the current state of medical malpractice claims, it is unrealistic to expect that many physicians, presented with an official notice from Health and Human Services stating that an employee is at high risk of developing a disease due to exposure, will not recommend a transfer. As a result, the employer will be faced with either invoking the cumbersome and costly arbitration procedure or transfering the employee. Clearly, a no-win position for the employer.

Second, the bill provides that employees who obtain a medical transfer to an available position retain their former wages and fringe benefits in perpetuity. This provision will create a two-tier wage structure throughout industry, in which employees performing identical work will be paid widely different wage rates. Experience with such pay systems show that they breed discontent in the workplace. Moreover, this provision ignores the fact that the high wages paid for many jobs in part reflect the risks associated with such work. Insisting upon the continued payment of such high wages for low risk or low skill positions seriously distorts the labor market, creates inflationary pressures and places American industry at an even greater disadvantage vis-a-vis foreign competition. Small companies simply will not be able to afford paying indefinitely a high wage rate to two workers--one of whom is doing the high risk work and the other who is not.

Third, the bill requires an employer to pay one year's full wages to an employee who seeks a medical transfer but finds no alternative job available. Such a provision will have a particularly severe impact upon small companies such as my own, which are least likely to have available alternative jobs but are least able to afford paying a worker's full salary in exchange for no work. Put quite simply, many small companies faced with paying double wages--one for the worker at home and one for the worker hired to replace the absent worker--will not be able to withstand the economic burden and will be forced to either automate, if they can afford it, or to close permanently their shop doors.

A second labor provision requires that employers pay for an employee's medical monitoring if any of the allegedly harmful exposure occurred in its workplace. This cost could include not only the cost of medical examinations and treatment but also the cost of lodging, food, and transportation incurred in receiving medical monitoring. There is no requirement that the employee have a symptom of the disease prior to the initiation of medical monitoring. Accordingly, the employer will be paying for medical treatment for workers who may never develop the disease for which they were notified.

A cost analysis prepared by the National Tooling and Machining Association estimates that the cost of these labor provisions, along with the cost of notification, for a company of 39 employees could result in a total company cost increase of 1-2 percent. Conceivably, this cost increase could swallow the entire profit margin of a small company. If Congress finds it necessary to enact this legislation, clearly changes must be made to these labor provisions.

THE BILL WILL RESULT IN AN EXPLOSION OF LIABILITY

One of the greatest problems posed by S. 79 is the potential for unwarranted lawsuits for employers who in good faith comply with the law. It will be virtually impossible for the Risk Assessment Board to determine with any great degree of certainty which specific employees have been exposed to substances at harmful concentrations and durations. Nonetheles, individual notices will be sent to employees telling them that they are at high risk of developing an occupational disease. These notices will serve as a catalyst for unwarranted litigation against employers. Although both large and small companies will be hit by this litigation, small companies, who generally do not have permanent legal staffs, will be severely hurt by this litigation.

Employer liability will flow from individual employee notification in at least three ways. First, tort and workers' compensation claims could be filed where an employee would asset that he or she "worries" or suffers "severe emotional upset" because he or she might have an illness or disease. A number of states now permit claims of this type even though there is no showing of physical illness or manifestation of such illness. Workers could claim that they were worried that the "risk" could manifest itself in a serious illness.

A case of this type was recently filed in the United States District Court for the Northern District of California by a former tire worker who alleged that he was exposed to a toxic substance in the workplace. He sought damages for his emotional distress and the creation of a medical monitoring program for himself and other employees. The court ruled in March, 1987 that because the employee suffered emotional distress only and had no physical symptoms of a disease, he did not have a claim covered by California's workers' compensation law; the court further stated, however, that the employee could sue his employer under tort law for the fear the employee suffered of contracting the disease. A class action of 7000 workers is currently waiting to be certified.

A second type of claim that could be filed as a result of S. 79, would be tort claims by employees against employers under a newly created exception to the normal workers' compensation "immunity shield." These claims are predicated on the theory that an employer failed to disclose important health information to his employees. Some courts have interpreted worker compensation immunity shield statutes as creating an exception for "intentional" wrong-doing to employees in this type of situation. Attorneys for employees could almost always assert that employers knew of the risk prior to the mandated notification.

A third type of claim that could be filed are tort claims brought on the basis that a named hazard or product caused a specific illlness. These claims are likely to arise even where there is no solid scientific connection between a substance or process and a harm. Unfortunately, a growing number of courts are using very attenuated causation principles in product liability cases. Current experience shows that many such cases have been settled for substantial amounts of money even though there is no objective proof that a particular substance or process could actually harm a human being.

That the notice will serve as a catalyst for lawsuits is aptly demonstrated by a 1980 NIOSH program. Through this project, approximately 800 employees of one company in Augusta, Georgia, were notified that they were at an increased risk of disease. As a result, $335 million in lawsuits were filed against the company. The company's stock plummeted, its creditors demanded immediate payment of outstanding debts, and the company went bankrupt.

We appreciate the fact that attempts have been made by the drafters of S. 79 to address the concern that the bill will foment new and unfounded liability claims. The principle approach has been to exclude from evidence facts relating to the notice provided under the bill and the findings of the Risk Assessment Board. The problem with this approach, however, is that under the bill plaintiffs' attorneys can obtain the names and addresses of all people who have been notified. The attorneys can then contact potential clients. With a potential client in hand and effective aggressive lawyering, all three types of claims described above can be brought without utilizing either the notice or the Board's findings.

If the drafters of this legislation are sincere in their intent to use this bill only as a means to inform employees of occupationally related health risks and to provide medical monitoring, these avenues of unwarranted litigation should be walled off.

THE ACTUAL IMPACT OF THE BILL IS UNKNOWN

The actual impact and ramifications of S. 79 are unknown and should be more thoroughly researched before a bill of this magnitude is enacted. The impact on insurance availability and premiums, health care benefits and liability, for example, should be carefully considered prior to the enactment of the bill. While cost should not be the primary issue where worker safety and health are concerned, the program described in S. 79 could place a severe economic strain on the business community, especially small businesses, without health gains that will justify its potentially huge costs.

THE BETTER APPROACH

The goals of S. 79 can be accomplished, and to a great extent already are being accomplished, through less costly and more efficient means. NAM is endorsing a substitute bill introduced by Representatives Jeffords and Henry. Simply put, this bill would mandate the expansion of OSHA's Hazard Communication Standard to cover all employers. The bill would therefore help to prevent disease by actually requiring all employers to train their employees in how to work safely with hazardous substances in the workplace. In contrast to this preventative approach, S. 79 advances merely an after-the-fact notification that a harmful exposure has occurred. If there are limited federal dollars to spend on worker health and safety, which realistically there are, it would seem to make more sense to devote those monies to preventing harmful exposures than to simply notifying workers after it is too late to help them.

The Henry-Jeffords substitute would also create a federal commission to study the issue of risk notification and whether it is even feasible or necessary given the multitude of state and federal regulations already in existence. Such issues as the impact on liability, insurance, and small businesses would be studied. Surely this is a more reasonable approach to the enactment of legislation than to haphazardly create a program with no idea of its actual impact.

Although a similar substitute has not yet been offered before the Senate, NAM hopes that this Committee will consider such a substitute as a better alternative to S. 79.

CONCLUSION

The newspapers are full of stories of big companies who can avoid lawsuits, pension liabilities and the like simply by declaring bankruptcy. If the company is big enough, the federal government comes rushing to the rescue. This is a security blanket that small businesses simply do not enjoy. We just cannot afford more layers of regulation, particularly the type of regulation that overlaps areas where OSHA already extensively regulates. Such a program as contained in S. 79 is simply not an acceptable solution to the issue of worker safety and health. We urge a more reasoned approach that balances cost and worker safety, with emphasis on disease prevention rather than after-the-fact notification. We hope all members of the Small Business Committee will support a Senate version of the Henry/Jeffords substitute.

Senator KARNES. Thank you, Mr. Gallagher. I really appreciate your comments and what you have done with that company. I appreciate very much your coming and testifying today.

Who would wish to go next?

STATEMENT OF DR. DONALD M. HAYES, CHAIRMAN, COMMITTEE ON SAFETY AND HEALTH, AMERICAN TEXTILE MANUFACTURERS, GREENSBORO, NC

Dr. HAYES. I have submitted 75 copies of these remarks and hope that they will be entered into the record in their written form and in the interest of your time and that of everyone else here I will try to abbreviate my comments, rather than reviewing all of the details that are included there.

I am here in a dual capacity. I am the director of health and hygiene for Burlington Industries. We hardly qualify as a small business. However, we operate our 68 manufacturing facilities as semiautonomous small businesses and I believe that our experience will be relevant to the concerns of this Committee.

In addition I am here as the chairman of the Safety and Health Committee of the American Textile Manufacturers Institute. The ATMI is the national trade association for the textile industry in the United States, and represents over 80 percent of the spinning, knitting, tufting, and finishing of U.S. products.

Appropriately enough, although ATMI's membership consists of 160 companies, a survey of their membership last year showed that 48 of those consist of fewer than 500 employees. So essentially, I am here representing at least a third of ATMI and in many regards the totality of ATMI.

My personal background is reviewed in detail in the written comments, and you will note that I am a physician. I finished medical school in 1954 and have been on the faculty of a number of medical schools and universities and in full-time medical practice until I joined Burlington Industries in 1979.

I am presently on the clinical faculty of the University of North Carolina School of Public Health, the Duke University School of Medicine, and the University of South Carolina School of Medicine.

When I joined Burlington Industries as medical director in 1979, it was partly because of my own personal background, which began in a small cotton mill village in North Carolina. So because of my continued association with the textile industry, I have a legitimate and lifelong concern with it and its people.

I would like to comment on the proposed rules, S. 79 and H.R. 162 very briefly, because I believe they are unnecessary and that many of their elements are duplicative of protections already afforded by the OSHA medical records standards, which I have not mentioned this morning, and the OSHA Hazard Communication Standard.

We believe that the implementation of the high risk notification proposal, as detailed in S. 79 and H.R. 162 would be financially onerous and potentially ruinous for small businesses across the Country.

One item detailed there has to do with medical monitoring, and the question has been raised this morning about medical monitoring which is not prescribed by the Hazard Communication Standard.

There are two reasons for this. One is that the Hazard Communication Standard deals with all hazardous chemicals, and in its expanded form will deal with hazardous substances in all businesses and industries eventually.

Not all of those are subject to detection by medical monitoring, and the effects of those are non-predictable, so that medical monitoring is a non-specific entity. We are accustomed as practicing physicians to having people tell us how we should practice medicine.

Usually those who have never been to medical school feel the most strongly about it. And they are the ones who feel most strongly that medical monitoring should be included.

Medical monitoring is prescribed, as a matter of fact, for specific hazards by OSHA and a number of standards that are in place now, cotton dust, asbestos, arsenic, lead, and a number of others.

And where known medical testing is appropriate, it is already in place. And could be added appropriately as the facts surface that indicate a need for those.

In general, however, the scenario that comes to mind by S. 79 provision is one whereby an employee would be notified that he or she was exposed to hazardous levels of tincture of rhubarb 15 years ago and that he or she should immediately consult a physician at the cost of the employer who was responsible for that, of course.

The employee would consult his physician. The physician would look at his symptoms, whatever they were, and try to figure out some way to relate the symptoms to the previous hazardous exposure.

A physician, being not unmindful of liability himself, would then proceed to perform every medical test known to man that might conceivably relate to any of those effects.

And the result would be that the bill would be sent to some small businessman, like Mr. Gallagher, or others for a set of tests which were not clinically indicated in the first place but which would be ruinously expensive.

Another thing that I think Senator Bumpers asked about earlier, and that is, how to prevent the onslaught of litigation that we see arising from S. 79. We think that it could not totally be prevented, because there is a certain level of litigation which needs to be expected and as a matter of fact is justifiable and reasonable and necessary.

However, the present Hazard Communication Standard, as it is now in place in a number of businesses and industries, puts the industry and the worker in a collegial relationship in trying to counsel and train the employee about his potential hazards such that the employee would not feel the need for trying to trace responsibility nearly as acutely as in this depersonalized proposal, S. 79 and H.R. 162.

Now, I would like to refer you to the medical record standard, OSHA 1910.20, which was put in place in 1981, and it requires that records of all workplace exposures and all medical examinations be kept on each individual employee.

These records must be retained for 30 years after termination of employment. Information about hazardous or any specific exposures prior to the date of initiation of that standard is spotty, unpredictable, and not generally available.

Thus the hope that one would be able to identify risks retrospectively through some tracking system to be developed by this bureaucracy that has been proposed seems unrealistic.

The system which is in place, however, would allow tracking beginning in 1981 if OSHA were encouraged to and allowed to make appropriate modifications in their medical record standard.

The second standard on which I want to speak is the Hazard Communication Standard, which has been alluded to by a number of speakers, 1910.1200. This standard was fully implemented at Burlington Industries and in other manufacturing industries around the country by May 25, 1986.

I will not bore you by repeating all of the details that were necessary in that implementation. I brought with me a manual comparable in size to the one which Mr. Gallagher showed you here.

I did not bring with me our file of material safety data sheets required by that, because we have over 4,000 material safety data sheets in our file, which are continually being updated and the employees are continually being retrained in response to those, so that that is a fluid and continually changing system.

The procedures which we implemented at Burlington Industries were those which were prescribed by the standard and included employee training, and that has to be done on a continuing basis.

We also believe it is important to audit programs and measure their effectiveness, and therefore we have an audit document which was attached to my testimony, which is used to measure the effectiveness of this program.

The program as shown on this audit shows that at two of our plants where we have done audits a year apart, 100 percent of the employees queried knew what hazardous chemicals they worked with and what those chemicals effects were, and were able to repeat and demonstrate the precautions they had been told to take with regard to those chemicals, and the symptoms they were to report to the medical department if they were developed.

This we believe is an adequate screening mechanism when it is in place universally. The cost of this program for us at Burlington Industries was $115,000 for our entire corporation.

Maintenance costs run about $16,000 a year. That breaks down to a per capital cost of $2.70 per employee for implementation, and 37 cents per employee per year for maintenance of the program. Obviously, this is a considerably less expensive approach to the problem, rather than continued medical monitoring.

We feel that the hazard communication program would be a reasonable basis on which to build. OSHA is now under court order, as you know, to expand the hazard communication program to cover other industries.

The expenses would be comparable in all industries, and rather than creating an entirely new Federal bureaucracy to assume a function we all agree is needed, that is notification and protection of employees of hazardous chemical exposures or hazardous substance exposures, it seems eminently sensible to us to build on already existing, functioning programs. For this reason we strongly support the Henry-Jeffords substitute, which has been designed to do exactly that. I would like to thank you for the opportunity to testify.

[The prepared statement of Dr. Hayes follows:]

TESTIMONY OF DONALD M. HAYES, M. D.
CHAIRMAN OF THE SAFETY AND HEALTH COMMITTEE
AMERICAN TEXTILE MANUFACTURERS INSTITUTE (ATMI)
DIRECTOR OF HEALTH AND HYGIENE
BURLINGTON INDUSTRIES

BEFORE THE

UNITED STATES SENATE
COMMITTEE ON SMALL BUSINESS

ON THE

HIGH RISK OCCUPATIONAL DISEASE NOTIFICATION AND PREVENTION ACT
(S. 79)

JUNE 10, 1987

Mr. Chairman, members of the committee, I appreciate the opportunity to appear and to present comments to this committee relevant to the concerns for employee risk and notification of risk. I am Donald M. Hayes, M. D., Director of Health and Hygiene for Burlington Industries. The Corporate Headquarters of Burlington is in Greensboro, N. C. and Burlington is the largest textile manufacturer in the United States. However, the nature of the textile business is such that each of our 68 manufacturing facilities represents a semi-autonomous business of its own and operates as a small business in its respective community. For example, we have two such facilities located in Monticello, Arkansas. I am appearing today on behalf of the American Textile Manufacturers Institute in my position as Chairman of the Safety and Health Committee of that organization. ATMI is the national trade association of the textile industry which represents over 80% of the spinning, knitting, tufting and finishing of U. S. products. Appropriately enough, although our membership consists of about 160 companies, a survey of the 1986 membership shows that 48 of these consist of fewer than 500 employees. Thus, ATMI has a significant interest in the fate of small businesses in this country.

By way of personal background, I believe it is significant to point out that I was born in a cotton mill village in a small town in North Carolina and I have a true and legitimate lifelong interest in textile manufacturing and textile people. I received my MD degree in 1954, and took specialty training at the Universities of Utah and Louisville and at the Bowman Gray School of Medicine in Winston-Salem, N. C. I practiced and was a full time faculty member at the Bowman Gray School of Medicine for 18 years in my capacity as a clinical oncologist. I attended graduate school at the University of Illinois and at the University of North Carolina of Public Health. I chaired the Department of Community (preventive) Medicine the Bowman Gray School of Medicine from 1970 to 1976. I chaired the Department of Community Medicine at the University of Texas Medical School at Houston from 1976 to 1979. I joined Burlington Industries in 1979 as Medical Director and have remained there since, assuming my present position in 1981. My current academic affiliations include an appointment as Adjunct Professor of Epidemiology at the University of North Carolina School of Public Health, Clinical Professor of Community and Family Medicine at Duke University School of Medicine, Clinical Associate Professor of Occupational Medicine at the University of South Carolina School of Medicine. I am also a member of the Board of Scientific Counselors of the Division of Cancer Prevention and Control at the National Cancer Institute in Bethesda.

I would like to comment first on the proposed rules for high risk notification. Both S. 79 and H. R. 162 are unnecessary and many of their elements are duplicative of protections already afforded by the OSHA Medical Records Standard and the Hazard Communication Standard. We believe that implementation of this proposal (High Risk Notification) will be financially onerous for small businesses across the country.

The expense of medical monitoring as prescribed by this proposal, superimposed on already escalating health care costs, will be unbearable for many small businesses. "Medical monitoring" is not a clear cut entity, even for known risks such as vinyl chloride. Absent a clear cut set of tests related to a particular risk or exposure, the average community physician in areas where small businesses are located will simply order every test which could conceivably be related to that risk. The result could be an added direct medical expense of up to $300 per annum per employee.

Those same physicians, as I, are not unaware of the threat of legal liability. The term "tort neutral" which has been applied to many of the amendments to S. 79 and H. R. 162 may be an oxymoron. Most small businessmen, physicians among them, believe that this proposal would give rise to a flood of workers' compensation and non-workers' compensation claims. Needless to say, this is an additional burden on American employers already struggling to remain competitive in the international marketplace.

I would like to describe for you the experience of Burlington Industries with two existing OSHA standards, recognizing that Burlington Industries is not a small business. However, as I mentioned earlier, each of our units functions as a small business and I believe much of the experience which we have had is transferable.

The first standard I would like to bring to your attention is the OSHA

Medical Record standard (1910.20). The Medical Record standard has been in place since 1981, and requires that records of all workplace exposures and all medical examinations be kept on each individual employee. These records must be retained for 30 years after termination of employment.

Information is not generally available on past exposures prior to the date of initiation of that standard. Thus, the hope that one would be able to identify risks retrospectively through existing record systems is not a realistic one. This system has been in place at Burlington Industries since 1981, and does allow tracking of individual exposures since that time.
The cost to us was approximately $300,000 per year. We are unable to derive a fixed per capita cost for this because of the changing number of employees involved over time. However, we presently have 43,000 employees at 68 locations. Assuming that the economy of scale which is available to Burlington Industries is not available to small businesses, this is an average expenditure of $7.00 per year per employee for record keeping. Again, I remind you that this standard has been in place already for six years and, thus, it represents a program in place for many businesses and industries.
The second standard on which I would like to speak is the OSHA Hazard Communication Standard (1910.1200). This standard was fully implemented at Burlington Industries and other manufacturing industries around the country by May 25, 1986. Its requirements briefly are:

1. Inventory and identification of all hazardous chemicals.
2. List of same for each location including:
    a. Toxics
    b. Carcinogenics
    c. Reproductive toxins
    d. Irritants
    e. Corrosives
    f. Sensitizers
3. Creation of a file of Material Safety Data Sheets (MSDS) on each substance.
4. Labeling of containers by type of material including marking of pipes.
5. Creation of training programs for workers
    a. General
    b. Specific

The procedures which we implemented at Burlington Industries were as follows: First, the creation of a written Hazard Communication Program for each location was required. Secondly, an individual was identified at each location who was to function as the Hazard Communication Coordinator for that facility. This individual then received appropriate training in the provisions of the standard. All record handling capabilities as required for the inventory and the maintenance of MSDS's were centralized but accessible from each location. A major requirement was the provisions of the standard, the hazards of the substances to which he or she was exposed in the course of performing his or her job, and the protective measures which needed to be in place to protect each individual against the hazards of those substances. Finally, an audit procedure was put in place so that the effectiveness of the program could be determined and monitored on a continuing basis. The attached exhibit is our audit document which is used to perform that function. It is anticipated that the program will be audited annually at each location using this document.

The costs of this program for Burlington Industries were not inconsiderable. Total implementation costs were $115,665. Maintenance costs appear to be relatively stable for the first year at about $16,000. This yields a per capita costs of $2.70 per employee and $0.37 per employee for initiation and maintenance of the program. Obviously, this would be a relatively minor expense for employees as compared to some of the major ones alluded to earlier.

How effective is this program? Audits at two plants using the document which I have supplied have shown that 100% of the employees know what hazardous chemicals they work with and 100% were able to repeat and demonstrate precautions they had been told to take with regard to those chemicals. The response was not as satisfying with regard to other items such as knowing the definition of the Hazard Communication Program, etc. However, we feel that the ability to name and protect oneself against hazardous chemicals is the nucleus of this program anyway.

It is obvious from this brief description that the Medical Records standard and the Hazard Communication standard are already in place for many businesses and industries just as we have described them for Burlington Industries. These constitute the basis of an effective mechanism for tracking toxic exposures and for training employees with regard to protection against those toxic exposures. As you know, OSHA is now in the process of expanding its Hazard Communication Program to cover all industries. The expenses of these are relatively minor and the logistics of both of these programs are not problematical for most industries, including small industries.

Rather than creating an entirely new federal bureaucracy to assume a function we all agree is needed, i.e. notification and protection of employees, it seems eminently sensible to build on already existing programs. For this reason, we strongly support the Henry-Jeffords substitute which is designed to do exactly that.

In closing, I want to take this opportunity to thank the chairman and the other members of the Committee on Small Business for allowing me to explain my industry's views on this important issue.

HAZARD COMMUNICATION

Audit Procedure/Program Review

The purpose of this procedure is to establish a standardized method of reviewing plant Hazard Communication (HC) Programs. This procedure can be utilized by Corporate/Division/Plant staffs to audit an implemented HC Program or to provide additional guidance during the establishment of a HC Program.

I. Review Of The Written HC Program

A. Date of latest revision ______________________

B. Have any exceptions/modifications been instituted? __________

C. Are these exceptions/modifications documented in written form in the HC Program Manual? ____________

D. Review these sections for implementation status and understanding of HC Program Administrator.

1. Hazard Chemical List Maintained __________

2. MSDS Files Maintained __________
Location of MSDS ________________________

3. Labeling of Containers/Piping ____________

4. Employee Information/Training ____________

5. Non-routine Work ____________

6. Contractor Hazard Communication ____________

7. Preparation of HC Package ____________________

8. Hazard Determination Procedure (Corporate or Division only) __________

9. Procurement of Confidential Information __________

10. Community Hazard Communication in Applicable States (NC, TN) __________

11. Compliance with EPA Title III, after May, 1987 __________

Comments on above by the item number __________________

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____

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Comments on above by item number ______________________

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IV. Employee Information and Training (Employee Questionnaire Included)

A. Have all employees, including salaried, been oriented to the HC Program? ______________________

____

B. Was the slide program "Living Safely With Chemical Hazards" shown to all employees? ______________________

____

____

C. Are new employees oriented to the HC Program? __________

How? ______________________

____

D. Are employees oriented to the MSDS and necessity for container labeling? ______________________

E. Has specific training as outlined under Section D of the HC Program Manual been conducted? ______________________

____

____

F. Have HC packages been prepared? ______________________

____

____

____

G. What are the contents of the HC package? __________

____

____

____

H. Are results of air monitoring for chemicals included? ______

I. Are records of training maintained? ________

Comments on the above by item number ____________________

____

____

____

VII. Hazard Determination of Company Products

A. Do you formulate or manufacture chemical products? ________
If no, continue to IX.

B. Have you participated in a hazard determination? ________

C. What records are available of determination?
Memo's from Corporate, MSDS/labels ____________________

____

____

Comments on above by item number ____________________

____

____

____

VIII. Confidential Information

A. Have you received any chemicals with confidentiality claims?
________ Obtain a copy of the MSDS for the product.

B. Has a confidentiality claim prevented an assessment of the hazard? ________

C. Have you sought assistance through the Corporate offices outlined in Section I? ____________________

____

____

Comments on the above by item number ____________________

____

____

____

b. Has the list been updated with the Commission of Labor by each July 1, thereafter?

____

Comments of above by item number ____________________

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____

____

HAZARD COMMUNICATION PROGRAM

Employee Questionnaire

1. Do you know what the HC Program is? ______________________
   Describe briefly ______________________________

   ____

   ____

2. Do you know the location of the HC Program Manual? ____________

3. Do you know what an MSDS is? ______________

4. Where are the MSDS maintained? ______________________

   ____

5. Where is the Hazardous Chemical List maintained? ____________

   ____

6. What hazardous chemicals do you work with? ______________
   Specifically name ______________________________

   ____

   ____

7. What precautions were you told to take? ______________

   ____

   ____

8. Have you been retrained with chemicals since initial training? ___

9. Have you been told your exposure levels to hazardous chemicals?

   ____

   ____

10. Have you asked questions about chemicals? ____________

    ____

    Did you receive a satisfactory answer? ______________

Senator KARNES. Thank you. Coming from business just 12 weeks ago and dealing with many of these same substances, I might use that as a pattern myself, back with some of the manufacturing concerns that I used to be involved with.

Mr. Greenbury, if you would like to proceed.

STATEMENT OF MARK GREENBURY, VICE PRESIDENT, ARROWSMITH TOOL & DIE, SOUTHFIELD, MI, REPRESENTING THE NATIONAL TOOLING & MACHINING ASSOCIATION, ACCOMPANIED BY BRUCE HAHN, MANAGER, GOVERNMENT AFFAIRS, NATIONAL TOOLING & MACHINING ASSOCIATION

Mr. GREENBURY. Yes, I would. Mr. Chairman, I would like to submit my written testimony for the record, and give you a brief synopsis thereof.

Senator KARNES. Without objection, so ordered.

Mr. GREENBURY. Mr. Chairman, on behalf of the 3,375 member companies of the National Tooling & Machining Association, and the 4.3 million members of the Small Business Legislative Council, I want to thank you for the opportunity to appear here today and share my observation on S. 79.

I am vice president of Arrowsmith Tool & Die in Southfield, MI. It is a family corporation. I am third generation.

The tooling industry today operates in a fiercely competitive world economy. And in the past few years the American tooling industry has seen a tremendous increase in foreign competition from Europe, Japan, and Third World countries.

Our members have largely been unsuccessful in replacing private business lost to foreign competitors with U.S. Government contracts. The Government procurement system simply has too many built-in barriers to enable small business to compete for spare parts procurement. We urge this Committee to review these problems during this Congress.

The loss of commercial business to foreign companies and a closed U.S. Government market has placed my company and other small metalworking plants in this Country in a tremendous cost-price squeeze.

The tooling machine industry is a highly skilled and machine intensive industry. Our employees have served long years of apprenticeship, provided by our companies and the association I represent here today.

Our company alone, for instance, since 1942, has trained over 160 employees in the tool and die-making trade. We value our employees highly, and because of our mutual dependency which exists between employer and employee, it is our mutual interest that we provide extensive medical and surgical benefits to cover the unforeseen health problems.

Our total benefits add between 32 percent and 38 percent presently to our hourly wage costs. Since the wages of skilled American tradespeople are already very high, and our added health care costs make it very difficult to compete with foreign companies, many of whom provide no health care benefits and whose wage rates are often a fraction of ours.

When a number of our Ohio members expressed their concern over the potential costs of this bill in a private meeting with the bill's sponsor, Senator Metzenbaum pointed out that he did not intend that the proposal impose an undue burden on business.

We have found that no research had been done on the proposal's economic impact on employment and business. So we set out to determine these objective cost estimates, and urged the Committee leadership to do the same.

We were both disappointed and puzzled to learn that the initiatives from Senator Quayle and others to approve the process of independent cost analysis acceptable to the leadership of both parties was unsuccessful.

We have prepared a chart showing the cost. I believe, Senator, you have it. This is the result of our efforts to identify the said costs.

To our knowledge, this is the only such analysis of the proposal's cost to business, which ranges from approximately $25,000 to $50,000 for a small company in our industry, or between 4.2 percent to 8.1 percent of sales to approximately $37,000 to $96,000, or about 0.9 percent to 2.4 percent of annual sales for a medium-sized company.

Now, in a letter that was also sent to all the Senators by our president of the National Tooling Association, he indicated, and we support the fact that our present profit margin is approximately 3.4 percent before tax.

Therefore it would be disastrous for a small business if 4.2 percent or 8.1 percent of sales were added to their cost. Therefore putting them in a loss state, and why should they remain in business?

And for a medium-sized company, it would take over two-thirds of our profit, if we made a profit, and that is money that we need to reinvest to remain competitive in the international market, which we are competing in right now.

I will give you an example. I recently quoted on a fuel tank for one of the big three automakers. I am not going to mention who, because I do not want to lose the customer. Thank you.

The job was approximately $1.48 million. We lost the job, we were the lowest American company on the quote. We lost the job to the Japanese by $50,000, or 0.3 percent. That represented 30,000 man-hours that went overseas in one job.

We were unable to obtain quantitative estimates for the impact of workers' compensation, health or liability insurance rate changes for those sheets.

The insurance industry witnesses and executives with whom we have consulted independently all believe there will be a significant increase in each of these insurance rates. They found that the doctors who specialize in occupational diseases do not agree with the amount of savings and the medical treatment costs, if any, that would result from this legislation.

According to our cost estimates, the impact of this proposal would cause a significant increase in the business closings and unemployment. As indicated from the percentages of profit lost, companies would basically, rather than going bankrupt, employers, entrepreneurs would say, why bother?

We believe the increase in work-related unemployment would far exceed the largest projections in health-related unemployment, which has been shown to be approximately 20 to 40 per 1,000 workers.

The National Tooling & Machining Association joins with nearly 200 other small business associations in opposing S. 79 in its present form.

Our opposition is not to the desirability of the occupational disease notification testing, but to the proponent's adamant opposition to obtaining independent cost estimates from a source acceptable to both parties before proceeding. The same proponents have not come forth with any comprehensive research to contradict our findings.

We are most appreciative that Senator Bumpers and Senator Quayle of the Labor Committee have responded to our concerns and have introduced S.R. 218, which is strongly supported by our association, the Small Business Legislative Council, and other small business organizations.

Nearly 200 small business associations have signed a letter calling for opposition to S. 79, and for an independent cost analysis of its impact, which would require that each committee supporting legislation obtain independent estimates of the impact of the legislation on employers, employees, in terms of jobs lost, and the economy, in terms of international competitiveness.

We believe that it is imperative that we wait for these estimates because our findings indicate that many more employees would be sentenced to the social and economic costs of unemployment than would benefit from the possibility of an earlier identification and treatment of an occupational health problem.

There is good reason to wait and reconsider. And that is to take time to study the impact that the Chemical Hazard Communication Program implemented by OSHA just 1 year ago.

That program requires my company and all other companies in my industry to inform workers of physical health hazards in the workplace and to train them to detect the presence of any hazardous chemicals and work with them safely. It also requires clear identification of all such substances.

The Chemical Hazard Communication Program Compliance Guide produced by the National Tooling and Machining Association helps our companies comply with the new OSHA regulations, and would certainly reduce the occurrence of occupational disease. We have a copy of that here also.

By studying where and how this program is working and where it needs improvement, Congress will be better able to draft effective, successor legislation. Mr. Chairman, Senator Levin, I thank you.

[The prepared statement of Mr. Greenbury follows:]

National Tooling & Machining Association

NTMA
PRECISION

BEFORE THE

U.S. SENATE COMMITTEE ON SMALL BUSINESS

JUNE 10, 1987

TESTIMONY OF

MARK GREENBURY, VICE PRESIDENT

ARROWSMITH TOOL & DIE

SOUTHFIELD, MI

ON BEHALF OF THE

NATIONAL TOOLING AND MACHINING ASSOCIATION

AND THE

SMALL BUSINESS LEGISLATIVE COUNCIL

9300 Livingston Road • Ft. Washington, Maryland 20744 • (301) 248-6200

Chairman Bumpers, Members of the Committee:

On behalf of my 3,375 colleagues in the National Tooling and Machining Association and the 4.3 million members of the Small Business Legislative Council, I want to thank you for the opportunity to appear here today and share our observations on S.79.

I am the Vice President of Arrowsmith Tool & Die in Southfield, MI. As an employer, we never lack for challenges. Not only is the work done by tool, die and precision machining companies challenging, but we operate our companies in a fiercely competitive world economy. Over the last few years, we have witnessed a tremendous increase in foreign competition for the provision of tools, dies and precision machining services from overseas, and even third world, countries.

Our members' efforts to replace business lost to foreign competitors with U.S. government contracting opportunities have largely been unsuccessful. There are simply too many barriers to small business participation and to the use of competition in of government spare parts procurement. We urge this Committee to review these problems during this Congress.

The loss of commercial business to foreign companies and the closed U.S. government market has placed my company, and the other predominantly small metalworking shops in the U.S., in a tremendous cost price squeeze.

My industry is a highly skilled labor and machine intensive industry. Our employees have years of training provided by our companies and the Association I represent there today. We value those people very highly. Because of the mutual dependency which exists between us and our employees, we have a great concern with their health and welfare. My company and most other members already provide extensive medical and surgical benefits to cover the occurrence of any unforeseen medical difficulty.

Our total benefit costs add anywhere from 32-38% to our hourly wage costs. With wage rates as high as we pay, the combined effect makes it very hard to compete against foreign companies who often provide no health benefits and whose wage rates are often a fraction of ours.

When a number of our Ohio members expressed their concern over the potential costs in a private meeting with the bill's sponsor, Senator Metzenbaum pointed out that he did not intend that the proposal impose an undue burden on business. Finding that no comprehensive research had been done on the proposal's economic impact on employment and business, we set out to determine objective cost estimates while urging the Committee leadership to do the same. We were both saddened and puzzled to learn that initiatives from Senator Quayle and others to agree to a process of independent cost analysis acceptable to the leadership of both parties was unsuccessful.

The chart attached to our testimony summarizes those costs we have been able to identify. To our knowledge, this is the only effort to comprehensively analyze the costs to business of implementing this proposal. The partial costs range from $25,694-49,921 for a small company in our industry or between 4.2 and 8.1% of sales to $37,362-96,669 or about .9-2.4% of annual sales for a medium sized company. You will note that we were unable to obtain quantitative estimates for the impact on workers compensation, health or liability insurance rate changes. Insurance industry witnesses and executives we have interviewed independently all project significant but unquantified increases in each of these insurance rates. We have also found a division among doctors specializing in occupational disease as to the amount of savings in medical treatment costs, if any, as a result of the legislation.

Let me contrast that data with the realities of the marketplace. Our company bid on a job to produce fuel tanks and the bid was for $4.8 million. We lost to the Japanese by $50,000. If our cost estimates are correct, we would expect that the impact of the proposal will cause a significant increase in bankruptcies and unemployment in our industry and among many other small manufacturing industries. We believe that the number of workers becoming unemployed as a result of the proposal may likely far exceed the number of lives saved. The occurrence of many types of occupational diseases is in the range 20-40 per thousand workers. Thus an increase of greater than 4% in unemployment would exceed the maximum potential for lives to be saved assuming the proposal would totally eliminate the particular occupational disease. If the proposal were to cause an increase in unemployment beyond 4%, then more workers would become unemployed than could be helped.

As a result of these concerns, our organization has joined with nearly 200 other associations in the small business community opposing S.79 in its present form. Our opposition is not to the desirability of occupational disease notification and testing but to the proponents adamant opposition to obtaining independent cost estimates from a source acceptable to both political parties before proceeding. Those same proponents have not been forthcoming with any comprehensive research which contradicts our findings. Since there are serious economic and social consequences associated with unemployment, we fear the proposal may hurt more than help those same workers we would all like to see it benefit.

We are most appreciative of the fact that senator Bumpers together with Senator Dan Quayle of the Labor Committee have responded to our concerns. They have introduced Senate Resolution 218, which is strongly supported by our Association, the Small Business Legislative Council and many other small business organizations. In fact, nearly 200 associations from the small business community have signed a letter calling for opposition to S.79 pending an independent cost analysis of its impact. The Resolution would impose no constraints on the content of S.79 or other mandated employee benefit legislation. It would simply require that the committee reporting such legislation obtain independent estimates of the impact of the legislation on employers, employees (in terms of jobs lost) and the economy (in terms of international competitiveness). Such an analysis may indeed prove some employee benefit legislation cost effective and help identify the high cost provisions of others for further scrutiny.

To those who might argue that we cannot afford to wait for such estimates, our response is that we cannot afford not to. If our estimates are within the range of total costs, we would likely be sentencing more employees to the social and economic costs of unemployment that those who would have a chance to benefit from any social and economic savings identified with early identification and treatment.

There is another good reason to wait. It would give Congress a chance to investigate the impact of the Chemical Hazard Communication Program implemented by OSHA just one year ago. That program requires my company to inform our workers of physical health hazards in the workplace and to train them on how to detect the presence of any hazardous chemicals and how to work with them safely. It also requires the clear identification of all such substances.

This Chemical Hazard Communication Program Compliance Guide produced by NTMA helps my company and others comply with the regulations. Those regulations will certainly reduce the occurrence of occupational disease in the workplace. By studying where and why it is working, as well as where and why it may still be inadequate, Congress will better able to craft successor legislation should it be necessary.

Thank you.

(5/1/87)

FORMULA FOR DETERMINING JOB LOSSES --
EMPLOYER FUNDED OCCUPATIONAL DISEASE NOTIFICATION AND TESTING
S.79/H.R.162

Workers Potentially Subject to Notification	21 million (1)
Retired Workers Potentially Subject to Notif.	6.3 million
1) Notification Costs (each, optional)	$ 3.00 (2)
Small comp. (10 cur. mfg. wkrs., 3 retir.)	39.00
Medium comp. (39 cur. mfg. wkrs., 12 retir.)	153.00
2) Surveillance/Testing Costs (each)	$200-1,000 (3)
Small comp. (10 mfg. wkrs., 3 retired)	2,600-13,000
Medium comp. (39 mfg. wkrs., 12 retired)	10,200-51,000
3) Transportation, Food, Some Lodging (each)	$ 20 (4)
Small comp. (10 mfg. workers)	200
Medium comp. (39 mfg. workers)	780
4) Cost of Idle Equipment (each)	$ 133.20 (5)
Small company (10 mfg. workers)	1,332.00
Medium company (39 mfg. workers)	5,194.80
5) Workers Compensation Rate Change (current annual rate $250/worker)	? (6,7)
6) Health Insurance Rate Change (current annual rate $2,205/worker)	? (8)
7) Liability Insurance Rate Change	?
8) Incremental increase in Settlements and Judgements (not including legal fees)	$2,333.33- (9) 14,000
9) Medical Removal Protection	
Small company	$21,350 (10)
Medium company	25,541
10) Total Costs	
Small company	$25,694-49,921
Medium company	37,362-96,669
(does not include increases or savings in workers' compensation or health insurance or savings from reduced treatment costs)	+ Line 5 + Line 6 (11) + Line 7
11) Product or Service Price Increase (Line 9 divided by company sales)	
Small company	4.2-8.1%
Medium company	.9-2.4% (12)
(assumes sum of workers' comp insurance, health insurace and treatment changes equal zero)	
12) U.S. Jobs Lost Due to U.S. Product Price Increase	? (13)

National Tooling & Machining Association
9300 Livingston Road, Ft. Washington, MD 20744 ** 301/248-6200

Senator KARNES. Thank you very much for that testimony. We do have some questions for the panel, if I could pose them at this point in time.

Mr. Gallagher, you referred to a study in your testimony that estimates the cost increase of these bill's provisions at 1 or 2 percent. That seems to be a relatively small percentage.

Could you relate, Mr. Gallagher, to the impact that that would have on your profit margin?

Mr. GALLAGHER. Well, sir, the 1 to 2 percent was a reduction in the bottom line. It was a higher cost in terms of, let us say, the sales dollars.

But for the last several years my company has maintained an after-tax earnings of close to 5 percent, which is very satisfactory, of course. But that is because we are in a new and growing industry.

Now if we look at all of the costs that might be associated with the S. 79, we think that that could deduct at least 2 percent to 2.5 percent from that figure on the bottom line.

Senator KARNES. We are talking 20 to 40 percent decrease in your bottom line profit as a result of anticipated expenses.

Mr. GALLAGHER. That is correct.

Senator KARNES. You certainly have spent a considerable sum already on plant improvements in making your plant a safer plant.

When did you do this, and why did your company make the decision to make these types of improvements?

Mr. GALLAGHER. Well, the nature of our business is chemically based, of course. And I have had, aside from my own experience with this company, I have had many years experience in the chemical industry.

So we started with a rather high level of safety control on the operation. In 1974, the Occupational Safety and Health Administration promulgated an emergency temporary standard on which one of the chemicals we used, and could not do without, was listed as a potential carcinogen.

As soon as that standard came out, we did everything possible to comply with the requirement, which included the additional of change rooms, increased ventilation, and so forth.

The standard was later remanded by the Third Circuit Court of Appeals on procedural grounds. However, we felt that this was the beginning of the regulatory age, and that we would continue to appropriate funds to make our plant safer and safer in anticipation of new regulations that would ensue.

Senator KARNES. What kind of a health benefit plan does your company provide your employees?

Mr. GALLAGHER. We have a standard medical-surgical, major medical policy, which we provide to all of our employees at no charge to them.

We, of course, also have workers' compensation insurance. Those are the two major areas where we pay for illness or accident, if it occurs on or off the job.

Senator KARNES. What impact would S. 79 have on your workers' compensation?

Mr. GALLAGHER. I do believe it will have an enormous impact, because even rumblings of regulation in the past from the Occupational Safety and Health Administration and the Environmental Protection Agency has had a drastic effect.

We have been dropped three times, just told by our insurance carrier for workers' compensation, we will no longer insure you. And then we would have to go into the Illinois pool and be drawn out, sometimes by the same insurance company, at 25 percent higher rates.

Now we have an insurance carrier who did not take us out of the pool, because at that particular time insurance rates were slightly more competitive. So they jumped in and insured.

But every time that you get health rumblings, the insurance companies are very quick to cut their losses and drop you.

Senator KARNES. I am just curious. How many companies were bidding on your business this year, as compared to maybe 5 years ago?

Mr. GALLAGHER. No relation of ours, but there is a company called Gallagher Insurance Agency of Illinois, a rather large company, and they always get seven or eight competitive bids on all of our insurance, casualty insurance, fire insurance, and so forth. Including workers, compensation.

So this past year I think at least six companies were asked to quote. Half of them said, no, they did not want to quote. So we selected from three.

Senator KARNES. And your claim experience has been very good.

Mr. GALLAGHER. Excellent. And yet our workers' compensation insurance bill for last year was $19,000, which is, I think, rather substantial for a company of 39 people.

Senator KARNES. Can you recall what it was maybe 4 or 5 years ago?

Mr. GALLAGHER. It is at least double from what it was 5 years ago. I really did not track those numbers. They are very significant numbers, but they are not ones that I directly get involved in.

Senator KARNES. Senator, do you have any questions?

Senator LEVIN. Yes. Thank you, Senator Karnes. Let me ask just a few questions to any of you that might want to answer.

Do you think it is appropriate that people who have been exposed to something which we now know could be harmful, although that exposure may have been many years ago, be notified of that exposure somehow or other?

In terms of equity and fairness in human health and putting aside the costs and the legal problems, and there are some obviously, is it desirable that people who have been exposed to something which can cause problems find out about it so they take whatever action is appropriate?

Mr. GALLAGHER. Are you addressing that to me?

Senator LEVIN. Any of you that might want to comment on that.

Mr. GALLAGHER. I would like to hear Dr. Hayes' comment. But, yes, I think it is quite appropriate to notify anyone that you feel has been exposed to a hazard that might be health-threatening.

Mr. GREENBURY. Philosophically, I agree also.

Dr. HAYES. I think it would be important to say, yes, first of all, but to recognize that there are degrees of things one might do.

For example, a NIOSH study was referred to earlier this morning, which involved finding and notifying groups of people who had been studied 30 years ago, among whom happened to be an uncle of mine who worked in a cotton mill.

And he called me up and he said,

> Hey, I got this fantastic letter from the National Institute for Occupational Safety and Health, telling me that I was exposed to cotton dust when I worked in the cotton mill 30 years ago.

And I said, yes. And he said, "do you mean to tell me that that is what we are spending our tax money for?" Cotton dust is in fact a hazardous substance. But he did not need to be notified that he had been exposed to it and it was hazardous. So there are degrees of urgency to the notification.

Senator LEVIN. In other words, it was obvious at the time that he was exposed and he knew it.

Dr. HAYES. Sure.

Senator LEVIN. Is there anything he can do about it now?

Dr. HAYES. No.

Senator LEVIN. Let us take something to which someone has been exposed, say, 10 years ago that might be useful that they find out about. There might be some action that we could take now to alleviate the problem, that would be useful for that person to know it.

Should we find a way to notify that person who has been exposed to something, where some action could be taken?

Dr. HAYES. Yes. Again, there are degrees.

Senator LEVIN. I agree with you.

Dr. HAYES. If it is something that is carcinogenic, for example, and you then put a person under surveillance for that particular kind of cancer for which they are at risk, so that you might detect it earlier, yes.

If it is for some kind of effect that is unpredictable or unknown, then I do not know. Dioxin for example. While we all are concerned about it, nobody yet knows what medical tests you do on somebody who was exposed to dioxin, because nobody knows what to look for.

Senator LEVIN. Now, for those exposures which you feel should be the subject of notice by somebody, how do we accomplish it?

Dr. HAYES. Well, I still believe that the best combination would be the records which are now being kept by employers and the official aegis of the organization which was created for protection of employee safety and health, OSHA.

Senator LEVIN. So you would have OSHA do the notification?

Dr. HAYES. In some way working with the employer.

Senator LEVIN. Asking the employer in certain categories of cases, did you have any employees who have ever been exposed to X substance? Give us the list, names, last known addresses, and we will notify that person.

I am just talking about that category of substances that you would agree should be the subject of notification.

Dr. HAYES. Or conversely, OSHA might say to them, we have records indicating that you have such employees. We recommend that you notify them and send us a copy of what you say to them, so that we will know that it was done.

Senator LEVIN. I think this question probably goes to Mr. Greenbury, by the way, who is a constituent of mine. So let me give you an official warm welcome here, as well as the more informal warm welcome we gave you before.

Mr. GREENBURY. Thank you, Senator.

Senator LEVIN. We are delighted to have you here. There was a GAO study in May of this year, which looked at S. 79 and related proposals, and did not identify the costs that you have in your testimony.

I am wondering if you can give an explanation of that?

Mr. GREENBURY. The GAO study referred to did not address the costs of implementing the proposal, nor was GAO asked to identify those costs. It made no attempt to estimate the costs expressed on lines 2 through 11 of the list of our analysis, with the exception of the insurance costs.

It was expressly stated that the limited time prevented the development of the acceptable approach for the projection of those costs.

Senator LEVIN. All right. I just have one additional question that any of you can address if you would like to. The National Institute for Occupational Safety and Health has already carried out some pilot projects to notify workers along the lines of the proposed legislation.

Are any of you familiar with those pilot studies?

Mr. GREENBURY. Senator, if I may, Bruce Hahn, who is manager of Government affairs for the National Tooling and Machining Association, I would like to refer to him.

Mr. HAHN. We researched the pilot study on the Augusta workers and found that costs for testing range from $200 to $1,000, that subsequent legal settlements ranged, or averaged rather, in that particular incident, $2,333.

Senator LEVIN. Which study was that? There were three that were enumerated earlier this morning. There is one down in Georgia——

Mr. HAHN. That is the one. The Augusta Chemical Co. And there was a followup in, I believe, August of last year's Journal of Occupational Medicine.

This original study was some years ago. So they had some followup data, including settlements of lawsuits, actual number of workers to contract the disease, which I think at that time was four out of the 800 that they were able to reach.

Senator LEVIN. Are you familiar with any of the other pilot studies besides that one?

Mr. HAHN. No. We are not nearly as familiar with the other ones.

Senator LEVIN. Anybody else want to comment on those studies? If not now, you can do it for the record.

Dr. HAYES. I think Dr. Burger previously spoke to those, and there was one mentioned that was done of the pattern makers union, and NIOSH, I believe, operated in that one.

Senator LEVIN. Do you have any comment on the results? Anyone else want to add anything at this point?

Mr. HAHN. We would just like to add one thing. Our study is the only study that has attempted to summarize the costs to business of implementing S. 79.

We have used Government data wherever we were able to find it. NIOSH data, independent estimates, publications like the Journal of Occupational Disease.

And we have learned, based on those estimates which do not include insurance costs, that the costs would approximate 4.2 percent to 8.1 percent of annual sales for a typical small tooling and machining company.

Those companies have an average profit of 3.4 percent. We believe that you would impose significant bankruptcies and significant unemployment if S. 79 were implemented in its present form.

What we think should be done is what is called for in S.R. 218. The majority and minority parties should come together, agree upon some independent provider of research which would either corroborate or conflict with this.

But they would then have the basis to go over provision by provision the expensive provisions and seek to find a way, if it were possible, to do the many desirable objectives of S. 79 without costing so much and thereby threatening our competitiveness, our members' companies, and our employees' jobs. We think that is the way to proceed.

Senator LEVIN. What was the assumption made as to the number of notices which led to that 4 to 8 percent increase in price?

Mr. HAHN. We did not make an assumption about notices. The way the program works, there would be 100,000 to 300,000 notified each year.

Those would be decided by the NIOSH board that identified populations at risk. That board may choose, say, a substance that is commonly used in our industry, or one commonly used in his.

Whichever it may be, all those workers that are exposed would be notifed. It is not 1 out of every 10 in every manufacturing industry. It would be all the workers exposed to whatever substance they happened to select.

Senator KARNES. Gentlemen, I appreciate you taking your time out of your very busy schedules to come and testify and present your testimony, and providing the exhibits and attachments.

Thank you very much. Thank you, Senator Levin, for coming. We are adjourned.

[Whereupon, at 12:55 p.m. the hearing was adjourned.]

APPENDIX

S.79

THE HIGH RISK OCCUPATIONAL DISEASE NOTIFICATION AND PREVENTION ACT OF 1987

Statement of the

AMERICAN SUBCONTRACTORS ASSOCIATION

to the

COMMITTEE ON SMALL BUSINESS
UNITED STATES SENATE

JUNE 10, 1987

AMERICAN SUBCONTRACTORS ASSOCIATION 1004 DUKE STREET, ALEXANDRIA, VA 22314-3512
(703) 684-3450

THE HIGH RISK OCCUPATIONAL DISEASE NOTIFICATION AND PREVENTION ACT OF 1987

The American Subcontractors Association is a national trade association with more than 6,500 member firms representing all major construction trades in 55 chapters. In addition to its individual company members, ASA represents 15 other specialty trade associations with members of their own.

ASA is the only national organization that speaks exclusively for the interests of construction subcontractors, regardless of their trade specialty or labor practices. ASA is dedicated to improving general business conditions for subcontractors through unified and cooperative actions.

AMERICAN SUBCONTRACTORS ASSOCIATION 1004 DUKE STREET, ALEXANDRIA, VA 22314-3512
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The American Subcontractors Association, as well as other representatives of the construction industry, supports continuing efforts to make construction sites as safe as possible for those who work in the industry. ASA strongly believes that workers have a justifiable "right to know" whenever they may be placed at risk due to occupational hazards on the job and regrets any occurrences where this may not have been the case. In addition, workers should be notified as early as possible about what diseases they may have been exposed to and what steps they should take to combat it.

However, ASA is concerned about attempts by Congress to legislate a program to notify workers at risk that is not only costly, but will also not protect a single worker from being exposed to an occupational disease. A program such as the one proposed by Sen. Metzenbaum will only serve to place an extreme burden on small businesses and the construction subcontractor in particular.

The Issue:

The High Risk Occupational Disease Notification and Prevention Act of 1987 attempts to protect workers through a systematic process of identification, notification, medical testing, evaluation, monitoring, and enforcement.

The bill would initially create a "Risk Assessment Board" within the Department of Health and Human Services (HHS) to determine which past and present employees have been or are currently at risk in a particular job or occupation and which ones need to be identified. This process is made even more complicated because the Board must determine which cases receive priority medical attention and counseling. Public comments are required for the determinations of the populations at risk, with final determinations subject to judicial review which is both arbitrary and capricious.

Once designated populations are identified as being at risk, HHS or an HHS-certified employer, state, or local government must notify each individual employee--current or past-- that has been designated as being at risk. It requires notifying employees who have been placed at risk over the past 30 years.

Employers of persons who have been notified as being currently at risk must provide medical testing, evaluation and monitoring services to the employee at the employer's expense except in cases where the exposure did not occur on the present job. This standard applies to both current and past employees.

In order to comply with S.79, the Secretary of Health and Human Services must establish within 90 days of enactment at least 10 but no more than 50 Occupational and Environmental Health Centers. There must be no more than one center in each state. The centers will provide education, training and technical assistance to the professionals who administer to those identified as being at risk.

In addition, the Risk Assessment Board must conduct or provide for research, training and education aimed at improving the means of identifying employees exposed to occupational health hazards and providing medical assistance to such employees. HHS may authorize injunctions through federal district court against violators of the Act, and damages may be awarded regardless of whether the employer's violation was made "willfully."

Analysis and Impact of the Legislation:

As was stated earlier, ASA strongly endorses the intent of this legislation, but the mechanics of it are essentially flawed. One of the main problems with the bill is that it will not protect workers from any occupational hazards. The intent of the legislation can be accomplished by a variety of existing programs and standards. Already in existence is the Occupational Safety and Health Administration, the Environmental Protection Agency, the National Institute for Occupational Safety and Health, the Consumer Product Safety Commission, the Food and Drug Administration, the Center for Disease Control, the Toxic

Substances Control Act, the Federal Insecticide, Fungicide and Rodenticide Act, the Superfund Amendments and Reauthorization Act, and the Resource Conservation Recovery Act. All of these agencies or acts deal with the adverse health effects of toxic substances in some detail, and this legislation will only make an overburdened bureaucracy more bloated and less effective.

More specifically, OSHA's Hazard Communication Standard, which is already the most expensive in history, is being tailored to the construction industry for implementation soon. This is being done for our industry as well as others. With this mechanism already in place, this legislation would only make the current system more complicated and more obtrusive. The increasing costs to employers will rise even more with enactment of such legislation.

A distinction should be made between risk assessment and hazard notification. Risk assessment, which is the basic premise of S.79, only serves to let workers know that they may have been placed at risk due to an occupational hazard at a previous point in time. Hazard notification, which is the concept behind the OSHA Hazard Communication Standard, serves to educate and train workers about hazards on the job before they have a chance to be exposed. This concept is the force behind many of the state "right-to-know" laws which have been very effective.

Perhaps the greatest fear of this legislation is its potential for a tort liability explosion. It goes without question that the number of lawsuits due to this legislation will skyrocket. The sheer fear of exposure to some disease will send droves of disaffected present and former employees into the courts. ASA is not against the awarding of damages based on gross negligence, but this legislation will send many of those who have been notified into the courtroom based on their fear of developing some disease, even though that might never happen. Indeed, it has already been established in the courts that an employee who has been notified that he may have been placed at risk has the grounds for a lawsuit based on the stress that the notification caused him. He has this right even though he may not actually be at any risk and may not develop any health problems.

The National Association of Manufacturers cites an example in this respect which could hold true for just about any industry: In 1980, approximately 800 employees of one company in Augusta, Georgia were notified that they were at an increased risk of disease. As a result, $335 million in lawsuits were filed against an already bankrupt company. If the 100,000 goal of the legislation is met, and only 10% of those notified enter into litigation and recover an average of $100,000 in damages; it will cost businesses and ultimately the consumer over one billion dollars a year.

NAM cited this example in manufacturing. The impact on the family-owned small subcontracting firm could be even more devastating. It would undoubtedly take only one well-financed lawsuit to send a small business into bankruptcy court, and the chances for recovery would indeed be minimal. Also, the additional insurance, monitoring and workhours needed will needlessly add additional strain on small businesses. This intrusion by the federal government is just one more hurdle that small businesses face, and ASA believes that existing health standards are already adequate in this respect.

The feasibility of implementing this legislation in the construction industry is highly doubtful. The construction industry is unique in that several employers work on one worksite. It will be next to impossible to be able to assign responsibility for exposure on these multi-employer worksites. Subcontractors have a seasonal, transient workforce and work on a contractual basis. Are all transient workers going to have to be tracked down to be notified? There are so many circumstances in the industry that are out of the reach of the subcontractor. Who is to take responsibility for a painting contractor who mixes two substances he purchased at a hardware store and produces a toxic fume? The normal business practice is for the salesman to notify the customer of any safety risks involved. In such a situation, should the salesman be liable? It is highly unlikely that anyone would say that he is.

The financial burden on the small subcontractor would be enormous if this standard were to be enacted. For example, it is estimated that there are 25,000 painting firms in the U.S. and that over 200,000 employees work in small, small-to-medium, and medium shops. Excluding the employees who work in the large firms:

To comply, 22,000 companies would have to:

1. Establish a written hazard communication program. Allow each firm an average of 10 hours at $25.00 per hour (22,000 x 25.00 x 10) = $1,100,000.00.

2. Establish a Material Safety Data Sheet (MSDS) file, storage, retrieval, and updating system. Allow each firm an average of 4 hours at $25.00 per hour; plus a file type of system; plus one hour of training of someone to file, update and retrieve. (88,000 x 25.00) + (22,000 x 50.00) + (22,000 x 25.00) = $3,850,000.00

3. Initially train all employees. Allow for 200,000 employees @ 2 hours each (average wage of $12.00 per hour) = $4,800,000.00. Administrative time to be allowed for the initial training-- 22,000 firms at 4 hours each (2 hours prepratory and 2 hours with the employees) @ $25.00 per hour = $2,200,000.00.

4. Follow-up updated training for new employees, new products and new processes. Estimate that each of the 22,000 firms will have to have at least 12 sessions (one per month) to update or initially train one or more newly hired employees. Allow for 22,000 x 12 x (2 hours administrative and 1 hour employee) = $16,368,000.00.

The total possible projected cost of total implementation across the board in the painting contracting industry is $28,318,000.00. Allowing that some of the training costs would be overlapped and should not be counted twice, it is reasonable to expect a projected cost to this one segment of the construction industry to be $20,000,000.00. The figure would undoubltedly be extremely higher for the industry as a whole.

On any given construction site--both new and remodel sites--when a painter is doing his work, there are a multitude of other craftsmen who are exposed to the hazardous materials being used. This not only applies to painters but also to roofers, concrete forms, plumbers, carpet layers, electricians, welders, air conditioner contractors, etc. Who is to assume the repsonsibility for the plumber being exposed by the painter? This legislation is much too vague to make a determination in this respect.

Using only painters as an example, to extend a notification program to all segments of the construction industry, it would become the responsibility of the painting contractor to have available at the work site:

1. The written Hazard Communication Program for other affected or exposed craftsmen.
2. The MSDS would have to be available (either at the site or in some easily accessible location).
3. A training program to protect those exposed to the hazardous materials would have to be implemented.
4. The same updating requirements that hold for a single manufacturing facility would have to be implemented at each common craft site.

Allowing for 25,000 painting firms that work on approximately 50 different sites per year, there would be an addtional cost of $12,500,000.00 if each site could be done for just $10.00 each.

If the extra costs sustained by the other craftsmen and the general contractor for coordinating this information are added in, the total could easily reach into the hundreds of millions. Where do proponents of this legislation think the eventual costs are going to be absorbed? The costs will result in one or a combination of three outcomes: the loss of jobs in the small business sector, higher prices for consumers, and the bankruptcy of many marginal enterprises, which all small businesses are classified for their first five years.

Summary:

ASA questions the scientific and legal bases on which this legislation is based. The methods of determining those at risk are contrary to established scientific practice, and the legislation sets a statistically unreliable figure for demonstrating a population at risk (a 30% increase in harmful effects based on evidence available). The bill includes broad and ill-defined language, and it essentially makes no connection about concomitant causes of disease, such as non-occupational exposure and personal habits. Indeed, even proponents of this legislation have publicly stated that cigarette smoking could substantially increase a worker's chances of developing a disease.

The makeup of the Risk Assessment Board, a politically-appointed body totally comprised of Public Health Service officals, can make broad determinations without input from the industries involved. Each industry is better equipped to deal with its own employees rather than grouping them together under one program. This Board will undoubtedly be open to many outside influences.

As is clearly evident, there are many unresolved problems with S.79. ASA urges Congress to defeat this legislation because it is unnecessary and overly burdensome for the small businessman and the construction subcontractor in particular. The proponents of the bill would like Congress to believe that the business community as a whole has signed off on this legislation, when, in fact, only a few large companies and associations support the bill. Out of this list of groups who have endorsed the bill, you will not find one small business. That is because large corporations can afford this bill. Small businesses cannot. No matter how well-intentioned this legislation might be, its enactment could be devastating.

WRITTEN STATEMENT

OF

THE SYNTHETIC ORGANIC CHEMICAL MANUFACTURERS ASSOCIATION

BEFORE THE

COMMITTEE ON SMALL BUSINESS

UNITED STATES SENATE

ON

S. 79,
THE HIGH RISK
OCCUPATIONAL DISEASE NOTIFICATION
AND PREVENTION ACT
OF 1987

JUNE 10, 1987

The Synthetic Organic Chemical Manufacturers Association ("SOCMA") appreciates this opportunity to provide testimony for the record on S. 79, the High Risk Occupational Disease Notification and Prevention Act of 1987. SOCMA is a non-profit trade association with approximately 140 members. Many of SOCMA's member firms are small businesses with annual organic chemical sales below $50 million.[1] SOCMA's members produce a wide variety of synthetic organic chemical products which are essential to virtually every other major American industry and are responsible for much of the innovation in the industry today.

SOCMA strongly recognizes the right of an employee to be informed of his exposure to hazardous substances. This is a basic right of the employee and the responsibility of the employer. For example, SOCMA supported the development of the OSHA hazard communication standard. Pursuant to the hazard communication standard, SOCMA's member companies provide notification to employees about the risks associated with exposure to potentially hazardous substances through training, labeling, and material safety data sheets.

However, SOCMA is concerned that the legislation as currently drafted may have significant adverse impacts on its member companies, particularly the small business segment, and on their employees.

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[1] SOCMA's significant small business membership is representative of the organic chemical industry as a whole. The Small Business Administration's Data Base shows that of firms in the industrial organic chemicals industry, SIC Code 2869, 85 percent, or 567 firms, employ fewer than 50 persons.

I. IMPACT OF S. 79 ON CHEMICAL COMPANIES AND THEIR EMPLOYEES

S. 79 would have a significant impact on SOCMA's members in terms of: (1) causing an increase in the cost of, or the outright elimination of, health, life, and worker compensation insurance available to employers with worker's identified in "at risk" categories; (2) increasing employer's exposure to liability claims based on limited or unsubstantiated data, and therefore affecting the cost and availability of workers' compensation and liability insurance; and (3) imposing significant costs of medical surveillance in circumstances where it is unwarranted. These impacts could cause small businesses to lose their ability to attract employees and to price products competitively with larger companies. Some small businesses may be forced to alter their product lines or to close altogether.

A. Availability and Cost of Health and Life Insurance

The majority of SOCMA's member companies provide insurance benefits to employees, typically in the form of health insurance and life insurance. These insurance benefits are an essential component of the overall compensation package offered by employers. Over the past several years, insurance premiums have significantly increased, and in some cases individuals identified as being in certain "high risk" categories have been denied insurance. SOCMA is concerned that S. 79 could have the unintended impact of significantly increasing the cost of, or eliminating the availability of the insurance programs offered to employees. These impacts may be particularly acute for small businesses, who do not have the capacity to self-insure and who rely on their insurance programs as an important aspect of their compensation package to compete with larger companies for capable employees.

A recent survey of SOCMA's membership revealed that all of the member companies responding currently provide health and life insurance to their employees.[2] Of these companies, about 70 percent do not self-insure, but rather turn to the insurance industry for reasonable, affordable benefit packages.[3] Insurance premiums for these companies have increased up to 100 percent in the past five years; the median increase was 28 percent. For example, Mr. Eugene Humphrey of the Humphrey Chemical Company testified before the Senate Subcommittee on Labor on March 9, 1987 that his company pays in excess of $310,000 for employee benefits on total sales of approximately $9 million.

SOCMA believes it likely that enactment of S. 79 would result in additional significant increases in the cost of insurance, particularly for small businesses, and in some circumstances may result in elimination of insurance availability. At present, the insurance industry generally does not question SOCMA's small member companies about the potential hazards associated with chemicals in their workplaces. Insurance companies have normally performed actual risk analysis by first pooling small groups with others to form a larger population. The risk is then calculated for the entire population group based on community ratings, experience ratings or a combination. The higher the expected health care costs, the higher the premiums.[4]

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[2] A broad-based survey of the U.S. workforce by the U.S. Chamber of Commerce recently determined that 86 percent of all companies provided health insurance benefits to employees. Research Center, Economic Policy Division, U.S. Chamber of Commerce, Employee Benefits 1985, at p. 18.

[3] The companies who do not self-insure generally are small businesses who do not have sufficient employees to diversify risks or are located in states prohibiting self-insurance. Among the small businesses, over 80 percent turn to insurance carriers for coverage. The survey also indicated that self-insurance is prohibited in New Jersey, Texas, and West Virginia.

If S. 79 is enacted, it is likely that the insurance industry would separate specific companies from the general pool based on the requirements for employee notification. The testimony of the Blue Cross and Blue Shield Association before the 99th Congress is instructive:

> In dealing with small insured groups, Blue Cross and Blue Shield Plans consider them as part of a pool and calculate a small group premium based upon spreading the risk more broadly across the composite, "super group." This is done in an effort to set affordable premium rates in a part of the market where, due to small group size, changes in the health status of few group members can have a huge impact on the financial risk a small group presents. In small group pooling or community rated situations, which generally involve employers of 100 or fewer persons, the higher risk of health care costs presented by "notified" employees would thus be spread across a larger population. If S. 2050's mandated benefits were to create significant costs in this already difficult to insure segment of the market, competitive forces could pressure Blue Cross and Blue Shield Plans to discontinue pooling and instead rate each small group according to the risk which it alone presents. This would result from healthier small groups refusing to "subsidize" the cost of S. 2050's special benefits for persons in other small groups. If this were to happen, the smaller the insured group the greater its premium increase would be, due to the inclusion of "notified" employees. In some cases, small employers might find health insurance altogether unaffordable.

Statement of the Blue Cross and Blue Shield Association on S. 2050, May 15, 1986, at p. 8.

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[4] Committee on Risk Classification, American Academy of Archives, "Risk Classification Statement of Principles," June 1980.

After enactment of S. 79, the small businesses in the chemical industry with employees designated as "at risk" thus would lose the benefits of pooling into a large population group. SOCMA believes that notification would be taken into account by insurance companies and would inevitably lead to higher premiums, because the experience base is of an insufficient size to be an adequate predictor and because notification likely would lead to an increase in health claims, whether justified or not.

SOCMA also is concerned about whether insurance would continue to be available to notified employees at any price. Numerous insurance companies have already moved away from providing health benefits to population groups that are determined to be in high risk categories. Although dramatic, the elimination of insurance availability for individuals exposed to the Acquired Immune Deficiency Syndrome (AIDS) virus led the District of Columbia to enact anti-discriminatory legislation.[5] Similarly, designation of certain employees as "at risk" by a governmental entity may have the effect of eliminating the availability of insurance to cover such employees, and relief similar to that enacted in D.C. could not be expected in this case.

B. Effect on Workers' Compensation and Liability Insurance

SOCMA believes that S. 79 may trigger spurious workers' compensation and product liability actions by employees designated as "at risk," thus imposing significant unwarranted costs on the chemical industry and exacerbating the current difficulties in obtaining workers' compensation and liability insurance. The ability to obtain such insurance at reasonable cost is an essential precondition to the conduct of business in the chemical industry.

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[5] D.C. Law 6-132.

The litigation against chemical companies resulting from S. 79 in many cases would be without merit but nonetheless would require significant expenditures to defend. Most of the litigation likely would involve employees with diseases from causes other than occupational exposure, employees who sue for fear of contracting a disease, or employees who sue because of a falsely perceived increased likelihood of contracting a disease. In addition, notification could inappropriately suggest liability in workers' compensation actions. Consequently, notified employees may attribute conditions actually based in other causes to their occupational exposures.

A similar response to publicity about a potential risk has been observed in other contexts. For example, after polybrominated biphenyls (PBB) were introduced into the food chain in Michigan in 1983, a number of spurious health effects claims were observed. A study of 23 farmers with disabling health complaints that they believed to be associated with PBB, which included a systematic evaluation of possible adverse effects, concluded that the patients "were not found to have objective evidence of deleterious effects at this time" and that "[t]here was no relationship between PBB levels and physical or laboratory abnormalities." Stross, et al., "Human Health Effects of Exposure to Polybrominated Biphenyls," 58 Toxicology and Applied Pharmacology 145 (1981). Therefore, any notification must be expressed in terms understandable to the individual notified, and be designed to serve a demonstrable medical benefit in order to avoid unwarranted impacts on the chemical industry.

Even without enactment of S. 79, workers' compensation and liability insurance has become a significant issue. Alleviation of the current liability insurance crisis was recently identified as the highest priority issue of the sixty final recommendations of the White House Conference on Small Business during 1986,[6] and the limited availability of liability insurance to physicians and municipal governments has been well documented. Several of our members have informed us of their current difficulties in obtaining such insurance. For example, Sterling Chemical Company recently completed a plant purchase in Texas City, Texas, in which one of the major issues was the placement of workers' compensation and liability insurance. Although a number of major insurance companies were asked to provide coverage, only one company was willing to provide a quotation. The insurance that was obtained was at a very high premium and imposed restrictive policy terms and conditions. In response, some chemical companies have been forced to pool together to form captive insurance companies to provide coverage,[7] and a number of states have implemented revisions to their workers' compensation programs to restrict benefits in order to continue to attract industry.[8] S. 79 would exacerbate this already-serious problem.

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[6] The White House Conference on Small Business, A Report to the President of the United States, Nov. 1986, at 21-22 (stating that "the liability insurance crisis in the United States has not only become a life and death sentence to many small businesses, but also is changing adversely our way of life . . .").

[7] "Chemicals Go to Captives for Coverage, "Chemical Week, Feb. 11, 1987, at 68.

[8] See, e.g., "Worker's Comp Bill Encounters Snags in Md.," Washington Post, Feb. 18, 1987, at B1.

C. Costs of Medical Surveillance

S. 79, as currently drafted, may impose costs of medical surveillance on employers in situations where it is not warranted. These costs would be particularly significant to small businesses, which may be forced to use funds for medical surveillance that otherwise would be allocated to other employee benefits. Medical surveillance can be very expensive. SOCMA has conducted a survey of the current medical surveillance practices of its member companies. Approximately 75 percent of the responding companies conduct medical surveillance programs. These programs cost an average of about $175 per employee per year.[9] Moreover, there are significant indirect costs associated with medical surveillance that are difficult to quantify. S. 79 would require companies to incur both the direct costs of perhaps very expensive and sophisticated testing and the costs associated with transportation to a designated facility or approved physician, lost work time, and possible replacement help,[10] as well as an increased burden of paperwork.

The aggregate costs of the monitoring required by S. 79 would be substantial. In 1977, the National Institute for Occupational Safety and Health (NIOSH) conducted a study of the costs of notification and medical surveillance. NIOSH concluded:

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[9] Medical Surveillance is performed in a variety of ways: full-time in-house physicians (15 percent of responding companies); physicians in-house on a part-time basis (30 percent); local clinic or hospital (50 percent); mobile medical service (35 percent). (Percentages add up to more than 100 because some companies use more than one method.)

[10] In many cases, particularly for small businesses involved in specialized operations, replacement personnel may not be available.

> Even when consideration is limited to carcinogens substantial costs are involved. The total cost associated with workers currently exposed to OSHA-regulated carcinogens full-time is around $424 million. The cost for both full and part-time workers is nearly $8.5 billion . . . . If consideration is extended to workers currently exposed full-time or part-time to any OSHA-regulated substance, total program costs are estimated to be $54 billion.

NIOSH, "The Right to Know: Practical Problems and Policy Issues Arising from Exposure to Hazardous Chemical and Physical Agents in the Workplace," July 1977 (prepared at the request of the Subcommittee on Labor, Senate Committee on Human Resources), at 28. Ten years later, the costs of the program would be even higher.

In view of the substantial expense of medical surveillance, it should be required only in those circumstances where a discernable medical benefit would result. SOCMA believes that the Board should be required to consider the costs associated with medical surveillance and the benefits that would accrue in specifying the type and frequency of medical surveillance that would be appropriate.

In this regard, SOCMA has surveyed its members regarding the outcome of existing medical surveillance programs. Medical surveillance has resulted in detection of occupationally-related illnesses only in very rare cases. The typical percentage of monitored employees diagnosed with occupationally-related problems among companies reporting was less than one percent. These results, in conjunction with the high cost of medical surveillance, demonstrate that medical surveillance should not be required except in circumstances where a discernable medical benefit would accrue.

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S. 79 thus would impose significant impacts in the form of insurance that becomes significantly more expensive or unavailable, increased exposure to liabilility actions, and costs of medical surveillance. These impacts would be particularly severe for small businesses in terms of direct outlays, ability to allocate resources in view of other regulatory initiatives,[11] and the continued opportunity to compete with larger businesses for capable employees by offering attractive compensation packages. S. 79 may adversely affect the competitive position of small businesses, and it is conceivable that some small businesses may be forced to abandon certain product lines or to close.

SOCMA encourages the Senate to limit the significant impacts that S. 79 would impose on the small business community and its employees. OSHA will soon be expanding the hazard communication standard to non-manufacturing sectors. Through the right-to-know provisions of the Superfund Amendment, all individuals, including former employees, are entitled to the same information. These measures, as well as generic standards for medical surveillance and monitoring, which we understand are now under consideration at OSHA, are appropriate vehicles for implementing the purposes of S. 79 without provoking a crisis in the small business community.

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[11] Small businesses are currently faced with a significant "resource crunch" in complying with other regulatory initiatives, such as the hazard communication standard and the Emergency Response and Community Right-To-Know provisions of the 1986 Superfund Amendments.

If we can be of further assistance, please do not hesitate to contact Susan Akers Kernus, Manager, Occupational Safety and Health, at (202) 659-0060.

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STATEMENT OF THE

NATIONAL PEST CONTROL ASSOCIATION

ON LEGISLATION REQUIRING NOTIFICATION TO WORKERS WHO ARE AT RISK OF OCCUPATIONAL DISEASE

S. 79 AND H.R. 162

SUBMITTED FOR THE RECORD

TO THE SMALL BUSINESS COMMITTEE
U.S. SENATE

By Cliff G. McCreedy

Manager, State Government Affairs

The National Pest Control Association (NPCA) is the national nonprofit association of structural pest control companies in the United States. Structural pest control is the service provided to the public that protects health and property from pest infestations in and around structures. The majority of NPCA's member companies, about 80-85%, fall into the category of small business.

The National Pest Control Association is opposed to S. 79 and H.R. 162, which would require the notification and monitoring of workers who are identified by the federal government to be at high risk of contracting an occupational illness. NPCA is opposed to this legislation primarily for these reasons:

1) These bills are unnecessary because of existing state - federal regulation controlling the commercial use and handling of pesticides by the pest control industry.

2) The proposed legislation duplicates state and federal worker right-to-know programs. The OSHA Hazard Communication Standard will soon be expanded to cover pest control and other service industries.

3) The medical removal protections providing for job replacement and severance pay are unworkable and too costly for small employers.

4) Medical expenses for the testing and monitoring of employees would exceed the small employer's ability to pay.

5) Such legislation will generate or aggravate tort and worker's compensation claims.

WORKER NOTIFICATION AND TRAINING IS ALREADY MANDATED BY U.S. EPA

The commercial use and handling of pesticides is fully regulated by the U.S. Environmental Protection Agency (U.S. EPA) and the state lead pesticide agencies under FIFRA (Federal Insecticide, Fungicide and Rodenticide Act). Before a pesticide can be put on the market it must meet stringent health and safety standards to ensure that use of the pesticide will not cause unreasonable adverse effects to man or the environment. Approximately 90% of the pesticides applied by the structural pest control industry are classified by U.S. EPA for general use and are available for application by both industry and consumers.

However, workers in the pest control industry are required by law to follow very specific use directions established by U.S. EPA for each individual pesticide. The pesticide label directions are the primary means of warning the applicator about the potential health hazards involved. Labels require applicators to take precautions to avoid exposure to hazards. These will include:

1) The use of protective clothing and equipment when necessary.
2) Washing with soap and water after mixing or handling.

3) Precautionary statements advising against spillage onto skin or clothing.

4) What to do in case of accidental exposure.

To ensure that applicators read, understand and follow the label, they must also be certified or act under the supervision of a certified applicator. Federal certification standards require applicators to pass examinations and demonstrate competency in the safe and proper handling of pesticides. In addition, many states have enacted laws which require safety training for persons who work under the supervision of a certified applicator.

NPCA strongly supports this state-federal regulatory program by providing training materials and programs. We believe that training of employees is the primary way to prevent exposure and prevent occupational illness. Occupational risks should be dealt with preventively instead of subjecting small employers to additional regulatory burdens.

STATE RIGHT-TO-KNOW LAWS

According to our most recent count, 21 states require employers in the pest control industry to notify workers about hazardous substances in the workplace in addition to what is already required by pesticide regulation. State worker right-to-know laws typically require employers to post signs in the workplace, provide Material

Safety Data Sheets to employees on substances handled, and provide training to workers on physical and health hazards. This is yet another layer of regulation which affects the pest control industry. Also, the Occupational Safety and Health Administration (OSHA) is currently assembling a new Hazard Communication Standard to encompass all workers exposed to hazardous materials. When OSHA extends the standard to include pest control operators, the industry will be affected in every state.

In sum, pesticide laws and right-to-know laws already fulfill the need for worker notification and enable workers to take an active role in protecting themselves from hazardous materials in the work environment. H.R. 162 and S. 79 would only add the U.S. Department of Health and Human Services to the agencies already involved in regulation of occupational health in the pest control industry.

MEDICAL SCREENING COSTLY AND QUESTIONABLE

The Congress has received testimony from experts in epidemiology and occupational health who question the effectiveness of medical screening and intervention as required by this legislation. They argue that current "state of the art" medical screening and intervention may not be adequate to accurately screen employees for occupational illnesses, particularly chronic illness.

We would ask Congress to study this issue more thoroughly before mandating employer-provided medical monitoring and intervention. These could strain the current health care delivery system and further aggravate the cost of employer-provided health care. Group health insurance is already prohibitively expensive for many of our smaller member companies.

MEDICAL REMOVAL/JOB PROTECTION PROVISIONS

The typical pest control company consists of pest control technicians who apply pesticides in the field, administrative employees who work in the office, owners and managers, and occasionally sales personnel. These functions are relatively finite and non-interchangeable.

Let us say that a pest control technician's physician determines that he should be transferred to a less hazardous position. S. 79 would then require the pest control company to give that employee equivalent salary and benefits to perform a "non-hazardous" function. Would the employer create a new administrative position and train the pest control technician to handle this position, while hiring or training yet another individual to take over the technician's service route. Under S.79 and H.R. 162, the only other option is to release the employee with one-year's severance pay. The costs and operational disruptions would be severe.

LIABILITY CONCERNS

The Congress should also consider the types of claims this legislation could generate. For example, recent judicial decisions have created an exception to the normal immunity from tort claims under workers' compensation. Successful tort claims have pierced the workers' compensation "immunity shield" by alleging that the employer failed to disclose health information to the employee. S. 79 and H.R. 162 will certainly notify many workers of occupational health risks, real or imagined, and create confusion about the role of the employer in addressing those hazards.

CONCLUSION

The National Pest Control Association is opposed to S. 79 and H.R. 162. If legislation in this area is deemed necessary by the Congress, NPCA would support passage of the substitute bill sponsored by Rep. Jeffords and Rep. Henry. This bill is far less onerous to small business than H.R. 162 or S. 79.

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